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THE PLANTS OF KANSAS



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CHECK LIST

OF THE

PLANTS OF KANSAS

—

SHOWING ALL LOCATIONS AND FINDERS OF EVERY PLANT IN THE
STATE, SO FAR AS KNOWN OR REPORTED.

—————

1789 FLOWERING PLANTS AND 164 FERNS AND MOSSES.

—————

COMPILED AND PUBLISHED
BY

BERNARD B. SMYTH,

BOTANICAL COLLECTOR OF NATIVE PLANTS OF THE PLAINS.

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TOPEKA, KANSAS, U. S. A.,

AUGUST, 1892.

SECOND EDITION.

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INTRODUCTION.

PURPOSE.

This list is an essay at compiling a complete enumeration of the plants of Kansas, with their localities, in form convenient for use by botanists and botanical students in correspondence. The compiler does not pretend to say he knows every plant in this list; but, as errors are discovered, corrections will be made in future editions.

NOMENCLATURE AND AUTHORITY.

As to nomenclature the compiler simply adopts those names said by common authority to be the correct ones. He is opposed to changes of name in a plant, and prefers a name long-established and well-known to a name which, though more correct, is comparatively unknown. Notwithstanding this, exceptions are made, where evidence is indisputable as to priority of some other name as applied to a particular plant. Most noticeable among these is *Hicoria* instead of *Carya*, *Navarretia* for *Gilia*, *Castalia* for *Nymphæa*, and others.

As to authority it is generally understood that whoever first discovers, names and describes a new species is entitled to the credit of its discovery. It often happens, however, in the haste of publication, that a species is assigned to a wrong genus; and it oftener happens that the limitations of a genus are changed, or a new genus is erected within the limits of an old one; and if the genus is accepted the new author's name takes the place of the old one, thus robbing the original discoverer of all credit. This is a species of piracy that has long prevailed, and is not without some show of right. Whether right or not it is adopted here; and that botanist's name is given who linked together both generic and specific names, thus assigning the plant to its true place botanically. Every author's name is spelled out at least once in this book, generally the first time it occurs. Where no name is given the compiler doesn't know who is authority. In the grasses the authority of Dr. Geo. Vasey of Washington, D. C., is followed with slight modification.

ARRANGEMENT.

The customary arrangement among botanists of the present day is followed, with a few exceptions on account of affinity or to suit the particular exigencies of the case. A few radical changes are made, as the transferring of the order *Nymphæaceæ* from *Exogens* to *Endogens*, these plants showing most clearly endogenous characteristics of structure. Conversely, the order *Smilacaceæ*

should be transferred to Exogens, these plants being exogenous when more than herbaceous. This is, however, held for further consideration. The order Cucurbitaceæ is placed under Gamopetalous Exogens where all the members of that order in this list properly belong. The order Sapindaceæ and allied orders, whether dialypetalous, gamopetalous, or apetalous, are grouped together under one heading, as they form a truly natural order, having as many characteristics in common as Compositæ, for instance.

EXPLANATION OF MAP.

The numbers following names of species indicate localities, which may be determined by reference to the index on page 7. The state of Kansas is supposed to be divided into $8 \times 9 = 72$ rectangular districts, each embracing about two counties. Numbering begins with 1, consisting of Doniphan county in the northeast. The next district west of that is 2, embracing Brown county and Nemaha as far west as the 96th meridian. The next district west is 3, and includes the western part of Nemaha county and all of Marshall. The most northwesterly district is 9, including Cheyenne and Rawlins counties as far east as the 101st meridian.

The next tier of divisions is numbered 21 to 29; that is to say the second tier of numbers 1 to 9. The first division is 21, directly south of district 1, and includes parts of Atchison, Leavenworth, and Jefferson counties.

The third tier goes only half way across the state and is numbered 31 to 35. The fourth tier is 41 to 49. In the western half of the state it takes the place of the third tier.

The most southeasterly division is 81, taking in Cherokee in the southeastern corner of the state and the greater part of Labette. The most southwesterly is 89, consisting of Morton and Stevens counties east to the 101st meridian.

A few numbers, as 30, 40, 92, 94, etc., have been applied in isolated cases in the list to show that the plant has been found growing near the boundaries of the state.

ACKNOWLEDGMENTS.

This list is based upon the labors of Prof. J. H. Carruth of Albuquerque, N. M., who has been State Botanist of Kansas for many years, and to whose aid and encouragement is due the compiler's earliest instruction in and incentives to the study of Kansas botany. The compiler is especially indebted to Dr. Geo. Vasey, Botanist, of Washington, D. C., to Prof. W. A. Kellerman of Columbus, O., to Dr. J. H. Oyster of Paola, Kan., and to Chas. E. Smith, 216 S. 15th st., Philadelphia, for valuable assistance in correcting this list. Obligations

are acknowledged to Dr. Wm. Trelease, of the Shaw School of Botany, St. Louis, Mo., for the determination of some plants of western Kansas. A few plants are admitted to this list on the authority of the late Dr. Geo. Engelmann of St. Louis and Dr. J. G. Cooper of Washington, who collected years ago along the Missouri river, in Leavenworth, Atchison, and Doniphan counties.

The following persons have also contributed to this list from the various districts to which they are accredited:

<i>Dist.</i>	<i>Names of Collectors.</i>	<i>Dist.</i>	<i>Names of Collectors.</i>
1	The compiler.		late of Agricultural College; Prof. E. A. Popenoe, Agr. Coll., Manhattan.
2	Mara Becker, Netawaka.	34	M. H. Panton, Junction City; W. Robson, Cheever.
2-3	Mrs. A. L. Slosson, Leavenworth; Paul Wilkinson, Seneca.	35	C. C. Olney, Minneapolis; J. M. Waterman, Delphos.
5-8	Prof. W. A. Kellerman, Columbus, O.	41	Dr. J. H. Oyster, Paola; Prof. W. A. Kellerman; Prof. W. E. Castle, Ottawa University, Ottawa.
7	J. D. Hatcher, Long Island, Phillips Co.	41-6	The compiler.
21	Dr. R. J. Brown, Rev. James Wilson, and Mrs. A. L. Slosson, Leavenworth; Prof. E. B. Knerr, Midland Coll, Atchison.	43	Rev. Loren Armsby and Dr. H. M. Byers, Council Grove.
21-2	The compiler.	45	Joseph Henry, Salina (now dead).
22	Prof. A. M. Nissen, late of Wetmore; Miss Mara Becker, Netawaka.	46	Supt. J. R. Bickerdyke, Bunker Hill.
23	F. F. Crevecoeur, Onaga.	47	Dr. Louis Watson, Ellis.
24-8	Prof. M. A. Carleton, Manhattan; W. A. Kellerman, Columbus, O.	47-9	Prof. E. A. Popenoe and W. A. Kellerman; Dr. F. H. Snow, Lawrence.
27	Prof. E. A. Popenoe, Manhattan; E. Bartholomew, Rockport.	51	Professor W. A. Kellerman; Hon. Joel Moody, Mound City.
31	Prof. J. H. Carruth, Albuquerque, N. M.; Dr. F. H. Snow, Dr. A. P. Fellows, and Dr. W. H. Saunders, Lawrence; H. C. Fellow, Washington, Kan.; Rev. John Bennett, Kansas City, Kans.	52	Miss M. P. Wright, Burlington.
31-4	The compiler.	53	H. E. Kinear, Topeka.
32	Prof. Edwin A. Popenoe, Manhattan; Prof. and Mrs. F. W. Cragin, Colorado Springs, Colo.; Miss Eunice A. Lyman, late of Washburn College; Mrs. Omar Newman and Mrs. Geo. L. Epps, Potwin Place; Mrs. A. H. Merrell, Mrs. Allie Kingman, Misses Grace and Lucy A. Hale and Fannie Rowley, Dr. H. W. Roby, Messrs. H. E. Kinear, J. W. Stailey, Geo. D. Hale, Wm. Smith, sr., John W. Adams, Aug. T. Daniels, A. T. Waggoner, H. G. Larimer, Prof. W. A. Harshbarger, and J. W. Beede, all of Topeka; Prof. J. E. Williamson, Fairfield, Iowa; Miss Jennie Kungle, Richland; Orr Adams, North Topeka.	53-7	The compiler.
33	Jerry M. Fields, E. A. Kilian, Mrs. S. M. Thomas, Alma; S. A. Baldwin, Wabauense; Prof. and Mrs. W. A. Kellerman,	57	Henry Haydock, Ness City.
		58-9	Dr. F. H. Snow, Lawrence.
		61-2	Prof. M. V. B. Knox, Humboldt.
		63	Prof. Z. T. Riley, Topeka.
		64-9	The compiler.
		67	C. C. Webb, Larned.
		68	J. W. Stailey, Lawrence.
		71-2	Prof. J. H. Carruth, Albuquerque, N. M.
		73	Prof. Z. T. Riley, Topeka.
		74	Prof. M. A. Carleton, Manhattan.
		74-9	The compiler.
		79	Mrs. James Jackson, Golden, Grant Co.
		81	Prof. J. H. Carruth; W. S. Newlon, Oswego; Miss M. Cooper, Labette.
		82	Prof. E. N. Plank, Kansas City, Ks.
		83-9	The compiler.
		84	Prof. O. F. McKim, Wellington.
		85	Prof. T. W. Corey, Conway Springs.
		86-8	Prof. W. A. Kellerman.
		88	Miss Dora Jackson, Arkalon.

Correspondents are invited to freely mention any errors they may discover in this list, and to send pressed and dried specimens of any plants found in their vicinity or elsewhere. Botanical names will be returned, and proper credit given in future editions, which will appear about once in two or three years.

MISCELLANEOUS NOTES.

The plants in this list are numbered, usually by tens. The number of any of the tens is readily obtained by noticing the hundreds near the top of the page, then adding the tens. The number of any other plant is simply obtained by counting down from the last ten.

Plants that are marked with a degree mark (°) or zero (0) are not native in Kansas.

Plants marked with a star are not described in Gray's Manual, 6th edition, 1890, or in Coulter's Manual of Rocky Mountain Botany.

The localities in which plants have been found are indicated by numbers, and may be determined by reference to the index on page 8 and the map on page 7. The collector, or one of several, may be determined by the table of contributors on page 5.

Thus, for instance: No. 128, page 10, "Claytonia virginica L. 31, 41, 81," indicates that this plant has been found in Douglas, Johnson, Miami and Cherokee counties, and was reported by Prof. Carruth, Dr. Oyster, or some of the other collectors from those districts.

No. 149, same page, "Callirrhoe digitata, N. 56, 66," shows the plant to have been found in Barton and Stafford counties by the compiler.

The numbers 1-2 indicate the districts 1 and 2; 1-4 indicate the districts 1, 2, 3, and 4.

BUSINESS NOTES.

None but perfect botanical specimens will be sent out unless accompanied by explanation.

A perfect botanical specimen is one that is carefully dried and shows, if an herb, root, root leaves, stem leaves, floral leaves, flowers and seeds or fruit, all as near the natural color as possible, and, in case of caespitose plants, includes several stems to show that fact. In case of trees and shrubs, one or more twigs showing leaves, flowers and fruit, with date of collection of each is given.

Plants from the general list will be sent at the rate of \$10 per hundred species. A species often contains more than a single specimen. Plants growing only west of the 97th meridian will be sent at the rate of \$12.50 per hundred species. Species will seldom consist of more than a single complete specimen.

Plants followed by the numbers 1-4, 21-4, 31-5, 41-4, 51-4, 61-4, 71-4, 81-4, or any one of these numbers, are in the general list, and will be sent at the lower rate.

Plants followed by the numbers 5, 25, 45, 55, 65, 75, 85, or upward, are only found west of longitude 97°, and will be sent at the higher rate.

If specimens ordered are not on hand they will be collected in their season or other plants sent or money returned, as preferred.

Care will be taken in putting up all collections, whether for colleges, societies, or individuals. Correct botanic names guaranteed on all plants sent out.

Orders for seeds, bulbs, and live plants filled in their season. Correspondence solicited. Everything sent carriage free.

Specimens will be MOUNTED on heavy record ledger paper, 11x16½ inches in size, at the uniform prices of 25 cents for large plants and 15 cents for small ones, with suitable discounts on larger orders to be made known on application.

Whenever desired, whether plants are mounted or not, they will be packed in strong and handsome tarboard BOXES, covered with imitation-morocco binder's cloth, and with close-fitting covers, the boxes 11½ by 17¼ inches inside, and not exceeding 4 inches deep, for 50 cents each. One box will hold from 70 to 100 plants.

A BOTANICAL OUTFIT, consisting of a solid oak and steel press, 25 pounds of driers, 250 manilla plant papers and a few inter-boards, all cut 11 x 10½, a good lens, trowel, and tweezers, all for \$8 00.

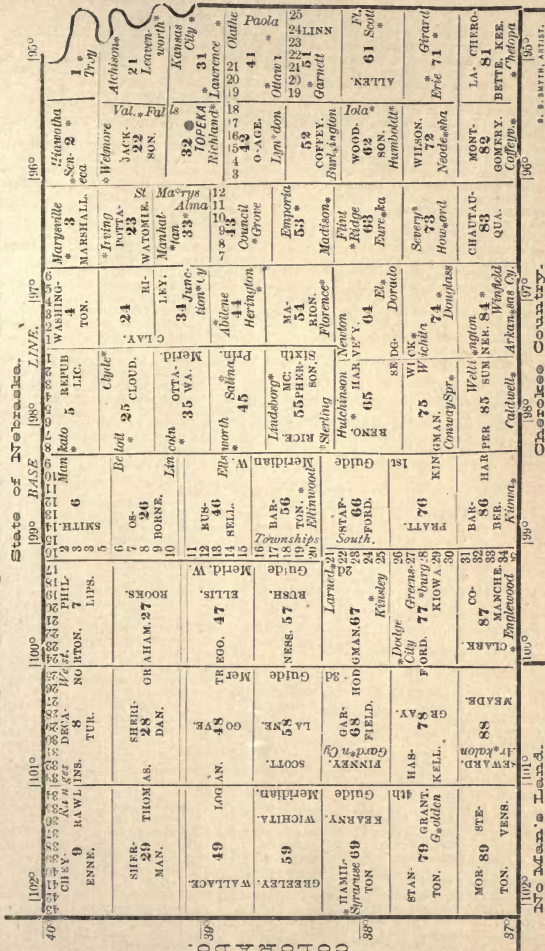
A PORTABLE PRESS, 10 pounds of driers, and 100 plant papers, for \$3.00.

Copies of this CHECK-LIST will be sent post-paid at the following prices: One copy, 25 cents; 2 copies, 40 cents; 5 or more copies, 15 cents each.

Address

B. B. SMYTH, Topeka, Kan.

BOTANICAL MAP OF KANSAS.



Scale: 60 Miles to the Inch.

B. B. SMYTH, ARTIST.

INDEX TO BOTANICAL DISTRICTS.

NUMERICAL INDEX.

- 1 Doniphan county, Elwood, Troy, White Cloud.
 2 Brown county, Hiawatha, Herton, Seneca.
 3 Marshall county, Blue Rapids, Vermillion.
 4 Washington Co., Hanover, Greenleaf, Haddam.
 5 Republic county, Belleville, Jewell, Mankato.
 6 Smith county, Bur Oak, Kirwin.
 7 Phillips county and part of Norton.
 8 Decatur county, Lenora, Oberlin, Cedar Bluffs.
 9 Cheyenne county, Atwood, Wano.
 21 Atchison, Leavenworth, Oskaloosa.
 22 Jackson county, Wetmore, Valley Falls.
 23 Pottawatomie county, Irving, Onaga.
 24 Clay Center, Clyde, Randolph, Leonardville.
 25 Cloud and Mittenell counties, Concordia, Beloit.
 26 Osborne county, Cawker City.
 27 Rooks and Graham counties.
 28 Sheridan county and part of Thomas.
 29 Sherman county and two-thirds of Thomas.
 31 Lawrence, Olathe, Tonganoxie, Kansas City.
 32 Topeka, Richland, Meriden.
 33 Manhattan, Wamego, St. Marys, Alma.
 34 Junction City, Chapman, Wakefield, Oak Hill.
 35 Ottawa county and part of Lincoln.
 41 Miami county, Ottawa, Paola, Louisburg.
 42 Osage City, Burlingame, Quenemo.
 43 Council Grove, Eskridge.
 44 Abilene, Solomon City, Herington.
 45 Salina, Ellsworth.
 46 Russell county, Wilson.
 47 Ellis and Trego counties.
 48 Gove county and part of Logan.
 49 Wallace county and part of Logan.
 51 Linn county, Garnett, Kincaid.
 52 Burlington, Waverly, Neosho Rapids.
 53 Emporia, Cottonwood Falls, Madison.
 54 Marion, Florence, Diamond Springs.
 55 McPherson, Lyons, Sterling, Lindsborg.
 56 Ellinwood, Great Bend, Hoisington.
 57 Rush and Ness counties.
 58 Lane and Scott counties.
 59 Wichita and Greeley counties.
 61 Bourbon and Allen counties, Fort Scott.
 62 Woodson Co., Neosho Falls, Iola, Humboldt.
 63 Greenwood county, Eureka, Fint Hills.
 64 Eldorado, Newton, Valley Center.
 65 Reno county, Hutchinson, Arlington.
 66 Stafford county, St. John, Salt Marsh.
 67 Larned, Kinsley, Jetmore.
 68 Cimarron, Garden City, Garfield county.
 69 Kearny and Hamilton counties, Coolidge.
 71 Crawford county, Girard, Erie, Pittsburg.
 72 Wilson county, Fredonia, Chanute, Thayer.
 73 Elk county, Howard, Severy.
 74 Wichita, Mulvane, Douglas.
 75 Garden Plain, Conway Springs, Kingman.
 76 Pratt county, Iuka, Ninnescah.
 77 Kiowa and Ford counties.
 78 Gray and Haskell counties.
 79 Grant and Stanton counties.
 81 Cherokee and Labette counties. (80 Galena.)
 82 Montgomery county, Cherryvale, Coffeyville.
 83 Chautauqua county, Elk Falls, Cedarvale.
 84 Winfield, Arkansas City, Geuda Springs.
 85 Wellington, Harper, Anthony. (95 Caldwell.)
 86 Barber county. (96 Kiowa.)
 87 Comanche and Clark counties. (97 Englewood.)
 88 Meade and Seward counties.
 89 Stevens and Morton counties.

ALPHABETICAL INDEX.

- | | | | | |
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SPERMOPHYTA.

Flowering Plants.

DIALYPETALOUS EXOGENS.

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- 1 *Anemone caroliniana* Walter: General.
 2 *cylindrica* Gray: 2-3, 31-2
 3 *pennsylvanica* Linnæus: 2-3, 31-3
 4 *patens* L., var. *Nuttalliana* Gray: 49
 5 *virginiana* L. 32, 42, 51, 61, 81-2
 6 *Anemone thalictroides* Spach: 32, 41
 7 *Aquilegia canadensis* L. 2-3, 31-4, 41, 61
 8 *Clematis fremontii* Watson: 47-9
 9 *ligusticifolia* Nuttall: 7 (Popenoc)
 10 *pitcheri* Torrey & Gray: 31-4, 62
verticillaris DeCandolle: 31
viorna L. 2-3, 21-3, 31-3, 42-4, 81
virginiana L. 1-2, 21, 31
 ◦ *Delphinium carolinianum* Walt. General.
consolida L. 2-3, 31-2, 43
exaltatum Alton: 2, 31-2
tricornis Mx. 2-3, 31-2, 41-7, 53-6, 74, 81
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 20 *Myosurus minimus* L. Everywhere; scarce.
 ◦ *Nigella damascena* L. 33, 43
Ranunculus abortivus L. 2-3, 31-4, 41, 47
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 var. *terrestris* Gr. 31, 65, 68
pusillus Poir.: 32, 81
 30 *recurvatus* Poir.: 2, 23, 31, 41
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Thalictrum dioicum L. 1, 21
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BERBERIDACEÆ.

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- 39 *Adlumia cirrhosa* Rafinesque: 51
 40 *Corydalis aurea* Willd. 32, 43, 47, 51
 var. *occidentalis* Eng. 32-3, 41-5
flavula DC. 31-2
micrantha Gray: 32, 43
Dicentra cucullaria DC. 1-3 south to 41-3

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- Arabis canadensis* L. 31-3, 41
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lævigata Poir. 31-2
 ◦ *Barbarea vulgaris* R.Br. 31
Biscutella wislizeni Benth & Hook. 88-9
 ◦ 50 *Brassica alba* Gray: 2-3, 31-2
 ◦ *campestris* (L.) Wood, Bot. & Flo. 32
 ◦ *nigra* Koch: 2-3, 31-3, 41-4
 ◦ *sinapistrum* Boissier: 2-3, 31-3
 ◦ *Camelina sativa* Crantz: 31-3
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rhomboidea DC. 81
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 31-4, 41-4, 53
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Draba caroliniana Walter: 31-4, 47, 56
 60 var. *micrantha* Gr. 41 (Prof. Castle)
cuneifolia Nuttall: 31-2, 41, 56
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 v. *Arkansanum* Gr. 68-9
cheiranthoides L. 13, 23
parviflorum N. 47, 49
 ◦ *Lepidium intermedium* Gr. 31-3
ruderalis L. Distribution quite general.
virginicum L. Distribution general.
Lesquerella gracilis Watson: 81
 70 *globosa* Wats. 81
ludoviciana Wats. 81
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lacustre Gr. 32-3, 43
obtusum Nutt. 31-3
 ◦ *officinale* R. Br. 31-3, 43
palustre DC. 31-2
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sinuatum N. 2-3, 21-3, 31-3, 42-3
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 ◦ *officinale* Scopoli: 31-3
 ◦ *thaliana* Gay: 31-2, 47 [34

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- 85 *Stanleya pinnatifida* N. 47
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CAPPARIDACEÆ.

- Cleome integrifolia* T. & G. 21-2, 32-3, 42, 45-7, 52-7, 64-9, 74-9, 84-9. Very abundant in SW. Kansas, forming vast fields on barren prairies.
Cleomella angustifolia Torr. 56, 65-7, 74, 84
 90 *Cristatella jamesii* T & G. 25, 47, 66-9, 74, 78-9
 * *Gynandropsis pentaphylla* DC. 21 (?)
Polanisia graveolens Raf. 31-3, 55-6, 76-7
trachysperma T. & G. 26-8, 45-8, 55-7, 66-9, 74, 78-9

RESEDACEÆ.

- o *Reseda lutea* L. 32

CISTACEÆ.

- Helianthemum canadense* Mx: 51
Lechea major Mx. 81
 minor Walt. 53

VIOLACEÆ.

- Ionidium concolor* B&H. 23, 51, 72
polygalæfolium Ventenat: 23
 100 *Viola blanda* Willd. 32
cucullata Ait. Throughout NE. Kansas.
nuttallii Pursh: 45-6, 56
palmata L. 2-3, 21-2, 31-2
pedata L. 2-3, 32, 41, 81
pedatifida Don: 2-3, 31-2
pubescens Ait. 1-2, 21, 31-2, 41
rotundifolia Mx. 2-3, 21, 82
sagittata Ait. 2-3, 31, 82
striata Ait. 2-3, 21, 32
 10 *tricolor* L., *v. tenella* Vasey: 25, 31-3, 41, 43, 63, 74

CARYOPHYLLACEÆ.

- Arenaria lateriflora* L. 1-2, 21
michauxii Hook. f. 1-4, 22-4, 31-2
patula Mx. 81
Cerastium arvense L., *var. oblongifolium*
 Hollick & Britton: 43-4
nutans Raf. 2-3, 31
 o *viscosum* L. (*glomeratum* Thuillier): 83
 o *vulgatum* L. (*triviale* Link): 31
 o *Lychnis githago* L. 32-3
Sagina decumbens T & G. 32
 o 20 *Saponaria officinalis* L. 31 2. 41-3
Silene antirrhina L. 31-2, 41-4
 o *noctiflora* L. 32
stellata Ait. f. 31-4, 42-3, 81
virginica L. 1, 21
Stellaria crassifolia Ehrh. 2 (Wilkinson)
longifolia Muhl. 32 [123]

PORTULACACEÆ (INCL. FICOIDEÆ).

- 127 *Claytonia caroliniana* Mx. 2
virginica L. 31, 41, 81
Mollugo verticillata L. Southern Kansas.
 30 *Portulaca oleracea* L. All over Kansas.
pilosa L. 33, 41, 66-7, 76-8, 82
retusa Eng. 82
Talinum calycinum Eng. 44, 56, 66
parviflorum N. 31
teretifolium Psh. 41, 44, 66

ELATINACEÆ.

- Elatine americana* Arnott: 81
brachysperma Gr. 41
triandra Schkuhr: 2, 23

HYPERICACEÆ.

- Ascyron crux-andreae* L. 2-3
 40 *Hypericum ascyron* L. 21
cistifolium Lam. 2-3, 32, 41, 52, 74, 81
drummondii T. & G. 81-2
maculatum Walt. 31-2, 81-2
nudicaule Walt. 81-2
 o *perforatum* L. 81
prolificum L. 31, 41

MALVACEÆ.

- o *Abutilon avicennæ* Gaertner: 2, 21, 31-3, 41
Callirrhoe alcaëoides Gr. 32, 41, 44, 52, 81
digitata N. 56, 66
 50 *involucrata* Gr. Sparingly distributed throughout the state.
triangulata Gr. 2-3, 45, 56
 o *Gossypium album* L. 81, 84
Hibiscus lasiocarpus Cavanilles: 81
militaris Cav. 31-2
 o *trionum* L. 31-3, 41, 56
 o *Malva crispa* L. 31-2
 o *rotundifolia* L. 31-2
Malvastrum angustum Gr. 47
coccineum Gr. 47, 56, 67-9, 77-9, 87-9
 60 *Sida spinosa* L. 21-3, 31-4, 42-3
Sphæralcea rivularis Torr. 32
Tilia americana L. NE. Kansas to 24, 33, 42

LINACEÆ.

- Linum lewisii* Pursh: 47, 56
rigidum Psh. 41, 44-7, 56-7, 65-7
sulcatum Riddell: 31-2, 47, 56, 81
 o *usitatissimum* L. 41 (r. r. tracks, Castle)
virginianum L. 81-2

GERANIACEÆ.

- Geranium carolinianum* L. 31-3, 41, 81
fremontii Torr. 48-9
 70 *maculatum* L. 21
Inpatiens fulva N. 2-3, 31-3
pallida N. 31-3
Oxalis corniculata L. 41 (Prof. Castle)
stricta L. Generally throughout the state.
violacea L. Generally distributed.
Tribulus maximus L. 49, 69 [176]

ACERACEÆ AND KINDRED ORDERS.

A "HAPPY FAMILY."

RUTACEÆ.

- 177 *Ailanthus glandulosa* Desfontaines: 31-2
Ptelea trifoliata L. 32, 42-3, 51
Xanthoxylum americanum Mill. E. Kansas.

ANACARDIACEÆ.

- 80 *Rhus canadensis* Marsh. 31-4, 41-3, 76, 86
var. trilobata Gray: 43, 86
copallina L. 2-3, 31, 47, 81
glabra L. In nearly every district.
toxicodendron L. 2-3, 31-3
var. radicans Torr. 2-3, 31-2, 43, 56
venenata DC. 82

OLEACEÆ.

- 0 *Chionanthus virginica* L. 61
Fraxinus americana L. Quite general.
pubescens Walt. 2, 23, 33-4, 51, 61, 81
90 *quadrangulata* Mx. 81, 84-5
sambucifolia Lamarck: 63, 73
viridis Mx. f. In nearly every district.

SAPOTACEÆ.

- Bumelia lanuginosa* Pers. 81-2
lycioides Gaertn. 84
tenax Willd. 81-2
Diospyros virginiana L. 41, 51, 61, 71, 81

ILICINEÆ.

- Ilex decidua* Walt. 81, 84-5
verticillata Gray: 85

CELASTRACEÆ.

- Celastrus scandens* L. Quite general.
200 *Euonymus americanus* L. 42-3, 82
atropurpureus Jacq. 23, 31-3, 41-3, 81

RHAMNACEÆ.

- Berchemia volubilis* DC. 81
Ceanothus americanus L. All over Kansas.
ovatus Desf. 31-5, 55-7
Rhamnus alnifolia L'Her. 21
lanceolata Psh. 31-3, 41-2

MENISPERMACEÆ.

- Calyocarpum lyoni* N. 81
Cocculus carolinus DC. 81-2
Menispermum canadense L. E. Kansas.

VITACEÆ.

- 10 *Ampelopsis quinquefolia* Mx. General.
Cissus arborea Desmoulins: 81-2
indivisa Desmoul. 2-4, 22, 31-3, 41
Vitis æstivalis Mx. 2-4, 31-5, 41-5, 55-6, 81
cinerea Eng. 31, 51
cordifolia Lam. 2-3, 31-2, 81
riparia Mx. 23, 31 3, 43, 56, 65
vulpina L. 1-3, 31-3, 41-3, 81

SAPINDACEÆ.

- Acer dasycarpum* Ehrh. Frequent in eastern Kansas from 98° east.
20 *negundo* L. General.
rubrum L. 1, 81
saccharum Marsh. 41, 51, 81-2
* *Æsculus arguta* Buckley: 33, 41-3, 53
glabra Willd. 2, 22, 31-3, 42-3
parviflora Walt. 32, 42, 82

- 225 *Cardiospermum halicacabum* L. 56
Sapindus acuminata Raf. 81-2, 86
Staphylea trifolia L. 2, 21-3, 31-3, 41-3

LAURACEÆ.

- Lindera benzoin* Blume: 71, 81
Sassafras officinale Nees: 71, 81
0 *Liquidambar styraciflua* L. 81
Platanus occidentalis L. In eastern Kansas west to 6th principal meridian.
forma styracifluifolia: 32

POLYGALACEÆ.

- Polygala alba* Nutt. 47, 55-7
incarnata L. 2-3, 22-4, 31-4
polygama Walt. 41
sanguinea L. 52
40 *senega* L. 7 (Popenoe)
verticillata L. 25, 31

LEGUMINOSÆ.

MIMOSEÆ.

- 0 *Acacia filicina* Willd. 82 (Plank)
Desmanthus brachylobus Benth: Everywhere on damp soil.
leptolobus T. & G. 32, 45, 56
Schrankia uncinata Willd. Wherever dry.

CÆSALPINEÆ.

- Cassia chamæcrista* L. General in East'n Kansas on dry prairies.
marilandica L. 31-3, 41-5, 55-6
nictitans L. 21
Cercis canadensis L. Southeastern Kansas.
50 *Gleditsia triacanthos* L. East of 99°.
Gymnocladus canadensis Lam. General.
Hoffmanseggia jamesii T&G. West of 100°.

PAPILIONACEÆ.

- Amorpha canescens* N. General, dry prairie. arborescent form: 76
fruticosa L. Quite general, low lands.
Amphicarpæa monoica Elliott: 2, 31-4
pitcheri T. & G. 31-2
Apios tuberosa Moench: 21-2, 31-3
60 *Astragalus adsurgens* Pallas: 56, 66-8
bisulcatus Gray: 46-7, 56, 66-8, 18
cæspitosus Gr. 49
canadensis L. Eastern Kansas.
caryocarpus Ker: Nearly everywhere.
distortus T. & G. 41
flexuosus Douglas: 47, 67
gracilis N. 34, 56
hypoglottis L. 56, 81
lotiflorus Hook. 33, 44, 47, 56
mexicanus DC. 31-2, 43, 56
70 *microlobus* Gr. 45, 56
missouriensis N. 47, 56
mollissimus Torr. West of 99th merid.
multiflorus Gr. 47
parryi Gr. 47, 78

LEGUMINOSÆ, CONT.

- 275 *Astragalus pectinatus* Dougl. 46-7, 81
pictus Gray: 9
 var. *filifolius* Gr. 69
plattensis N. 32-3, 44
racemosus Psh. 47, 56
- 80 *scopolorus* Porter: 83
shortianus N. 49
- Baptisia australis* R. Br. 41, 51, 56
leucantha T. & G. 2, 23, 31-3, 41-3, 52
leucophæa N. 2-3, 23, 31-3, 41, 81-4
tinctoria R. Br. 81
- Crotalaria ovalis* Psh. 82
sagittalis L. 31, 33
- Dalea alopecuroides* Willd. 2-3, 31-4, 54-6
aurea N. 6, 26, 44-7, 55-6, 66-9, 76-9
 90 *enneandra* N. 33, 44-7, 56, 65-7, 76, 86
formosa Torr. 29
jamesii T. & G. 68, 78
lanata Spreng. 45, 56, 67-9, 79, 88
rubescens Wats. 88
- Desmodium acuminatum* DC. 2-4, 23, 31-4
canadense DC. 23, 31-4
canescens DC. 31-2
ciliare DC. 81
cuspidatum Hook. 31-3
 300 *dillenii* Darlington: 12, 32-3, 81
illinoense Gray: 31-4
marilandicum Boott: 81
- Desmodium nudiflorum* DC. 31-2, 43
paniculatum DC. 31-2, 43, 81
pauciflorum DC. 82
rigidum DC. 23, 66
rotundifolium DC. 21, 32
sessilifolium T. & G. 31-3
viridiflorum Beck: 31-2
- 10 *Glycyrrhiza lepidota* Psh. In every district.
Hosackia purshiana Benth. 25, 44, 56, 65, 76
forma orientata: 56, 66
 var. *pusilla*: 32, 45, 56, 67
- Indigofera leptosepala* N. 74, 81, 87
- Lathyrus ornatus* N. 33
palustris L. 2-3, 23
polymorphus N. 33
venosus Muhl. 43
- Lespedeza capitata* Mx. 2, 31-3, 41, 51, 81
polystachya Mx. 81
 20 *procumbens* Mx. 31-2
reticulata Persoon: 32, 81
stuvei N., *v. intermedia* Wats. 31
violacea Pers. 31, 41
- Lupinus pusillus* Psh. 43, 66
- o *Medicago sativa* L. 32-3, 56, 67
 o *Melilotus alba* Lam. 2-3, 31-3, 47, 56
 o *officinalis* Willd. 32, 52
- Oxytropis lamberti* Psh. 44-7, 56, 67
splendens Dougl. 27
- 30 *Petalostemon candidus* Mx. Everywhere.
multiflorus N. 2-4, 21-3, 32-3, 41-3
- 333 *Petalostemon gracilis* N. W. K.
decumbens blackberry-fruited form: 76
villosus N. 44, 56
violaceus Mx. 31-4, 47, 56, 81
- Phaseolus perennis* Walt. 43-4
- Psoralea argophylla* Psh. 31-3, 56, 81
campestris N. 56, 78
cuspidata Psh. 46-7, 56, 66
 40 *digitata* N. 54-6, 65-6, 76-7, 84, 88
esculenta Psh. 31-4, 47
hypogæa N. 32-4, 56, 66
lanceolata Psh. 26, 33, 56, 66, 76-8
melilotoides Mx. 66, 81
tenuiflora Psh. All over Kansas.
 white-flowered form: 32
- o *Robinia pseudacacia* L. 31-2, 41, 81
Rhynchosia volubilis Wood: 81, 84
Sophora sericea N. 44-7, 55-7, 66-7, 77-8
- Strophostyles angulosus* Ell. East'n Kansas,
 50 var. *Missouriensis* Wats. 31-2
pauciflora Wats. 1-3, 21-3, 31-2
peduncularis Elliott: Eastern Kansas,
Stylosanthes elatior Swartz: 82
- Tephrosia virginica* Persoon: 31, 54
Thermopsis rhombifolia N. 45 (Henry)
- o *Trifolium arvense* L. 32
 o *hybridum* L. 32
 o *pratense* L. 31-2
 o *procumbens* L. 31-2
- 60 *reflexum* L. 31-2
 o *repens* L. 31-2
stoloniferum Muhl. 31-2, 41, 64
- Vicia americana* Muhl. 31-3
 var. *truncata* Brewer: 34
caroliniana Walt. 31
linearis Greene: All over Kansas.
micrantha N. 81, 88
- Wistaria frutescens* Poir. 1-2, 21
 (*Leguminosa*, 127)

ROSACEÆ.

- Agrimonia eupatoria* L. 31-4
forma intermedia: 32
- 70 var. *parviflora* (*parviflora* Ait.) 31-2
- Amelanchier alnifolia* N. 71, 81
canadensis T. & G. 1, 21, 81
 var. *oblongifolia* T. & G. 1-2, 32
- Aruncus sylvester* Kost. 1, 21
- Cerasus pumila* Mx. 27, 47-8
pennsylvanica Searge: 1-2, 21
- Crataegus coccinea* L. 32-4, 41, 81
 var. *mollis* T. & G. 32
crus-galli L. 31, 81
- 80 *oxyacantha* L. 31
punctata Jacq. 81
tomentosa L. 31-2, 43
- Fragaria virginiana* Mill., *v. illinoensis* Gr.
 1-5, 21-5, 31-4, 42-4
vesca L. 2-5, 32
- Geum album* Gmelin: 31-4

ROSACEÆ, CONT.

- 386 *Geum strictum* Ait. 82
virginianum L. 31
Gillenia stipulacea N. 81 (Carruth)
Malus angustifolia Mx. 31, 41
 90 *coronaria* Mill. 31-2
Padus demissa Roemer: 47 (Kellerman)
serotina Agardh: 1, 21-2, 31-2
virginiana: Quite general.
Physocarpus opulifolius Max. 41 (Oyster)
Potentilla argentea L. 41, 83
arguta Psh. 28-9 (Kellerman)
canadensis L. 31-3, 41, 81
 ° *gracilis* Dougl. 31-2
hippiana Lehm. 29, 49
 400 *norvegica* L. 31-4, 41
pennsylvanica L. 32
rivalis N. 31
supina L. 31
Poterium annuum N. 79
Prunus americana Marsh. Everywhere.
chicasa Mx. In nearly every district.
gracilis Eng. & Gr. 87 (Kell.)
maritima Wang. 82 (Plank)
Rosa blanda Ait. 2-3, 31-2, 47, 56
 10 *v. arkansana* Best: 31-2, 45-7, 56
humilis Marsh., *v. lucida* Best: 56, 81
setigera Mx. 2-3, 31, 41, 47, 56
Rubus canadensis L. 1-3, 31-3, 41
occidentalis L. 2-3, 31-4, 41, 47
strigosus L. 21, 31-2, 63
villosus Ait. 2-3, 31-4, 41
Spiræa tomentosa L. 31

SAXIFRAGACEÆ (ALSO CRASSULACEÆ).

- Heuchera hispida* Psh. 21, 31
Ribes aureum Psh. 32, 47, 56
 ° 20 *floridum* L. 32
gracile Mx. 1-3, 31-4, 41
oxyacanthoides L. 1-2
Penthorum sedoides L. 31-4, 81
Sedum pulchellum Mx. 61, 81
torreyi Don. 81 (Carruth)

ONAGRACEÆ AND ALLIED ORDERS.

- Ammannia coccinea* Rottboell: 31-4, 56
humilis Mx. 31-3, 56
Callitriche autumnalis L. 12, 47
deflexa Braun, var. *Austini* Heg. 41
 30 *verna* L. 21, 31, 47
Circaea lutetiana L. 33
Cuphea viscosissima Jacquin: 41, 51, 81
Didiplis linearis Raf. 43-4
Oenothera albicaulis N. 41, 47, 56, 86
biennis L. 1-3, 31-5, 42-3, 47, 55-7, 64
 var. *grandiflora* Lindley: 56
cæspitosa N. 47 (L. Watson)
canescens Torr. 46-7
coronopifolia T&G. 49 (Popenoe) [439]

- 440 *Oenothera fremontii* Wats. 5-7, 46 8, 86
fruticosa L. 81-2
 var. *linearis* Wats. 31, 81
glauca Mx. 81-2
hartwegi, var. *lavandulæfolia* Wats. 47
linifolia N. 81 (Carruth)
missouriensis Sims: 2-3, 31-3, 41-4
pinnatifida N. 47, 56
pumila L. 2-3, 31-2, 43, 46-7
rhombipetala N. 27, 44, 47, 56
 50 *serrulata* N. 32-5, 47, 52-5, 64
sinuata L. 2-3, 31-3, 81
speciosa N. 2-3, 31-5, 56, 64
triloba N. 47, 56, 67
 var. *parviflora* Wats. 46-7, 56
Epilobium angustifolium L. 1
coloratum Muhl. 23
Gaura biennis L. 21-2, 41, 81
drummondii T. & G. 17-9, 76 9, 85-9
coccinea L. 33-5, 47, 56, 76
 60 *filipes* Spach: 2-3, 56, 66, 76-9, 82, 86-8
parviflora Dougl. 27, 32-5, 47, 56, 78-9
 * *sinuata* N. 66-9, 76 9, 87-9
Jussiaea repens L. 31-3, 42-3, 74-8, 84-5
Ludwigia alternifolia L. 1-2, 21, 31, 81
palustris Ell. 31-3, 47
polycarpa Short & Peter: 41 (Oyster)
Lythrum alatum Psh. 31-5, 56, 66, 76-8, 81
lineare L. 66, 77-8, 87-8
Myriophyllum scabratum Mx. 31, 47
 70 *spicatum* L. 6 (Kellerman)
verticillatum L. 47 (L. Watson)
Podostemum ceratophyllum Mx. 41
Proserpinaca palustris L. 41
Rhexia virginica L. 81 (Carruth)
Rotala ramosior Koehne: 31-3
Stenosiphon virgatus Spach: 21-3, 31, 54, 1-3

LOASACEÆ.

- Mentzelia nuda* T&G. 49, 68-9, 77-9, 85-9
oligosperma N. 31-5, 47, 84-5
ornata T. & G. 47-8, 68, 78-9, 85-9

PASSIFLORACEÆ.

- 80 *Passiflora incarnata* L. 82 (Plank)
lutea L. 81 (Carruth)

CACTACEÆ.

- Cereus cæspitosus* Eng. 47, 68-9, 79, 88-9
viridiflorus Eng. 79, 89
Mamillaria missouriensis Sweet: 47, 56
 var. *cæspitosa* Wats. W. Kansas.
vivipara Haworth: 35, 45-6, 53-6
Opuntia arborescens Eng. 89
camanchica Raf. 77-9, 87-8
 90 *fragilis* Haw. Western Kansas.
missouriensis DC. General.
rafinesquii Eng. General.
 var. *fusiformis*: 33 [492]

UMBELLIFERÆ.

- 493 *Æthusa cynapium* L. 31
Berula angustifolia Koch: 47
Chærophyllum procumbens Crantz: 31-3, 41
Cicuta maculata L. 31-3, 43
Cryptotænia canadensis DC. 31-2
Cymopterus glomeratus Raf. 56
montanus T. & G. 56
500 *Discopleura capillacea* DC. 25, 32-3, 74-5
var. Nuttallii Coulter & Rose: 81
Erigenia bulbosa N. 82
Eryngium aquaticum L. (= *yuccæfolium*)
leavenworthii T. & G. 41, 51-2, 72
yuccæfolium Mx. 31-2, 41-2, 51-2
Heracleum lanatum Mx. 41
Hydrocotyle americana L. 81
Leptocaulis divaricatus DC. 87
* *echinatus* N. 33, 47
10 *patens* N. 32-4, 44-5, 56, 67
Osmorrhiza brevistylis DC. 31-2, 81
longistylis DC. 41, 51 [512
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- o *Pastinaca sativa* L. 31-2, 41
Peucedanum fœniculaceum N. E. Kansas.
515 *nudicaule* N. 42-4, 47, 56
villosum N. 44, 56
Pimpinella integerrima B & H. 31
Polytænia nuttallii DC. 31-4, 41, 56
Sanicula marylandica L. 31-2, 41
20 *var. canadensis* Torr. 31-2, 41
Sium cicutæfolium Gmelin: 31
Thaspium aureum N. 2-3, 31-2
var. trifoliatum Coulter & Rose: 21
barbinode N. 2-3, 23
Zizia aurea Koch: 32, 41

CORNACEÆ.

- Cornus asperifolia* Mx. 31, 81
circinata L'Heritier: 31-2, 56, 74, 81-4
florida L. 1-2, 81
paniculata L'Her. 31-3, 43, 56, 74, 84
30 *pubescens* N. 31, 47, 81-4
sericea L. 32, 41-3
stolonifera Mx. 32-3, 43, 81-4 [532

GAMOPETALOUS EXOGENS.

CAPRIFOLIACEÆ.

- 533 *Lonicera grata* Ait. 51, 81
o *sempervirens* Ait. 81
sullivantii Gr. 41, 81-2
Sambucus canadensis L. 2, 31-3, 43, 56, 81
Symphoricarpos occidentalis Hook. 46-7
racemosus Mx. 44
vulgaris Mx. 1-3, 21-3, 31-3, 41-3, 81-2
40 *Triosteum angustifolium* L. 82
perfoliatum L. 2-3, 31-3, 43, 82
Viburnum prunifolium L. 31, 41, 51, 81.

RUBIACEÆ.

- Cephalanthus occidentalis* L. General.
Diodia teres Walt. 31, 41, 51, 81
Galium aparine L. 2-3, 23, 31-3, 41, 47
asprellum Gr. 2-3, 23, 47
circæzans Mx. 31-3, 41, 45
concinnum T. & G. 31
pilosum Ait. 41
50 *trifidum* L. 31, 43
triflorum Mx. 31-2, 41
Houstonia angustifolia Mx. General.
minima Beck: 31
purpurea L. 31-2, 43, 56
var. longifolia Gr. 56
Spermacoce glabra Mx. 71, 81-2

VALERIANACEÆ.

- Valerianella stenocarpa* Krok. 41, 81-2

COMPOSITÆ.

VERNONIACEÆ.

- 558 *Elephantopus carolinianus* Willd. 81
tomentosus L. 81
60 *Vernonia arkansana* DC. 41
altissima Nutt. 31-2, 81
baldwinii Torr. 33, 41
fasciculata Mx. 31-4, 41-2
jamesii T. & G. 23, 56, 79
noveboracensis Willd. 31-2, 41, 71-2, 81

EUPATORIACEÆ.

- Brickellia grandiflora* N. 31, 47
Eupatorium ageratoides L. f. 2, 31-3, 41, 81
altissimum L. 31-3, 41
coelestinum L. 82
70 *ivæfolium* L. 44, 47
perfoliatum L. 2, 31-3, 42-3
purpureum L. 31-2, 44, 47
semiserratum DC. 23, 47, 52, 81
serotinum Mx. 2, 32, 42, 52, 82
Kuhnia eupatorioides L. 31-2, 81
var. glutinosa Ell. 32-3
* *var. gracilis* T. & G. 32, 47
Liatris cylindracea Mx. 2, 22, 31-2, 42
punctata Hook. 31-3, 47, 56
80 *pycnostachya* Mx. 31-2, 41, 56, 81
white-flowered form: 32, 68
scariosa Willd. 31-3, 44, 81
white-flowered form: 22
spicata Willd. 32, 42, 71, 81-2
squarrosa Willd. 31-3, 41-5, 56, 66, 81
white-flowered form: 66
var. intermedia DC. 32-3 [584

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ASTEROIDEÆ.

- 585 *Amphiachyris dracunculoides* N. 41, 51, 47
Aphanostephus arkansanus Gr. 53-4, 69

Aplopappus ciliatus DC. 31, 45, 47
divaricatus Gr. 56, 66, 74, 79
fremonti Gr. W. Kansas.

- 90 *rubiginosus* T. & G. 47-9, 67-9, 79
spinulosus DC. 45-7, 66, 67, 79

Aster azureus Lindl. 31-3, 81
bigelovii Gr. 79
canescens Psh. 47 (L. Watson)
cordifolius L. 2, 32
diffusus Ait. 31-3, 41
drummondii Lindl. 33-4, 41, 71-2, 81-2
dumosus L. 71-2, 81
ericoides L. 2-3, 32, 43, 47, 62, 71-2, 81

- 600 *var. villosus* Gr. 32
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 70 *Iva ciliata* Willd. 2, 23, 31-3, 41
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 ° *Petunia violacea* L. 32
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- 21 *philadelphica* Lam. 31-2
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- Ellisia microcalyx* Nutt. 32
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- Eritrichium jamesii* Torr. 88
- ° *Heliotropium indicum* L. 81
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- 80 *tenellum* Torr. 31-2, 41, 45
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- 90 *Onosmodium carolinianum* A. DC. 31-2
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- 1000 *hispidula* Pursh. 31-5, 43, 47, 53
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- ° *Leonurus cardiaca* L. 31-3
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- Lycopus angustifolius* Nutt. 32
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- 10 *virginicus* L. 2, 23, 31-3, 41-3, 51
- ° *Marrubium vulgare* L. 31-3, 43, 81
- Mentha canadensis* L. 31-3, 42
var. glabrata Benth. 32-3, 41-3
viridis L. 31-2, 43, 82
- Monarda bradburiana* Beck: 47, 56, 65-7, 74
citriodora Cerv. Mid. & west'n Kansas.
fistulosa L. Everywhere in eastern Ks.
punctata L. 42, 53, 56, 65-7, 74
- ° 20 *Nepeta cataria* L. 21-2, 31-3, 41-4, 81
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 40 *Teucrium canadense* L. 31-5, 41, 47, 56, 67
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- 1077 *Gerardia tenuifolia* Vahl. 31, 41, 52
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 var. microphylla Benth. 2-3
 80 *Gratiola virginiana* L. 44
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 thapsus L. 31-3, 41-2, 81
Veronica americana Schw. 23
 anagallis L. 2, 32
 arvensis L. 81
 peregrina L. 31-4, 43-7
 virginica L. 31-2, 41-3

BIGNONIACEÆ.

- ° *Catalpa bignonioides* Walt. 2, 31-2
 10 *speciosa* Warder: 31-2, 61, 71
Martynia proboscidea Glox. Quite general,
 fields and prai., often troublesome.
Tecoma radicans Jussieu: 32, 81-2

OROBANCHACEÆ.

- Aphyllon fasciculatum* Gr. 2, 56
 ludovicianum Gr. 3, 52, 57
 uniflorum Gr. 31, 33

LENTIBULARIACEÆ.

- Utricularia cornuta* Mx. 31-2
 minor L. 41, 81
 vulgaris L. 21, 31, 47

PLANTAGINACEÆ.

- Plantago cordata* Lam. 31
 20 *lanceolata*, L. 2-3 31-3, 56
 ° *major* L. 41, 52-3, 56
 patagonica Jacq. 41 ?
 var. aristata Gr. 31, 51, 61, 71
 var. gnaphalioides Gr. W. Kansas.
 var. spinulosa Gray: 32
 pusilla N. 32, 44, 47
 rugelii Decaisne: 31
 virginica L. 32-3, 41-2

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APETALOUS EXOGENS.

ARISTOLOCHIACEÆ.

- 1129 *Aristolochia siphon* L'Her. 51, 81
 30 *tomentosa* Sims: 82
Asarum canadense L. 31, 51

NYCTAGINACEÆ.

- Abronia fragrans* N. 56, 66, 68, 78-9, 88
micantha Torr. 56
 * *Oxybaphus albidus* Sweet: 31-2
angustifolius Sw. 31-4, 41-3, 56, 81
 linear-leaved form: 32
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hirsutus Sweet: 32, 56-7
nyctagineus Sw. 31-4, 41-3, 56, 81

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- Acnida tuberculata* G. 31-4, 56
 var. *subnuda* Wats. 32
 40 *Amarantus albus* L. 31-2, 56
blitoides Wats. 31-3, 41-3, 55-6
chlorostachys Willd. 31-2
 var. *hybridus* Wats. 31-2, 56
crispus Braun: 32, 56
 o *hypochondriacus* L. 32
paniculatus L. Widely distributed.
retroflexus L. 31-2, 41, 56
spinous L. 31
torreyi Benth. 31-2
 50 *Anychia capillacea* DC. 31
dichotoma Mx. 31-2
Atriplex argentea N. 56
patula L., var. *hastata* Gr. 65-6
 var. *subspicata* Wats. 56
Chenopodium album L. 31-4, 41, 56
ambrosioides L. 31-2
 v. *anthelminticum* Gr. 31-2, 81
boscianum Moq. 31-2
 o *botrys* L. 21, 31-2
 60 *capitatum* Wats. 56, 66
glaucum L. 2, 32
hybridum L. 31-3, 56
murale L. 31-2
rubrum L. 56, 66
urbicum L. 32, 71, 81-2
Cladanthrax lanuginosa N. 59, 68, 9, 78, 9, 87-9
Corispermum hyssopifolium 34, 45, 56
Cycloloma platyphyllum Moq. General.
Fœrlichia floridana Moq. General.
 70 *gracilis* Moq. 44, 56, 65-6, 68, 74, 81
Iresine celosioides L. 66, 81
Monolepis chenopodioides Moq. 44
Paronychia dichotoma N. 56, 68, 9
 jamesii T&G. Central and western Ks.
 o *Phytolacca decandra* L. 21, 31-3, 43
Salicornia herbacea L. 25, 56, 65
Suaeda depressa Ledeb. 56
linearis Moq. 56, 65-6

POLYGONACEÆ.

- 1179 *Eriogonum annuum* N. 46-7, 55-7, 67
 80 *longifolium* N. 88 (Kellerman)
microthecum N. 68, 79
 var. *effusum* T&G. 56, 66-9
 o *Fagopyrum esculentum* Moench: 31-2
Polygonum acre HBK. 2-3, 31-2, 43
amphibium L. 31-4, 51
aviculare L. General.
erectum L. 2-3, 31-2, 56
 var. *fastigiate* variety 3 to 6 ft. high: 32
cilinode Mx. 32
 90 *camporum* Meisner: 31-2, 41
convolvulus L. General.
dumetorum, v. *scandens* Gr. General.
hartwrightii Gray: 21, 32
hydropiper L. 2-3, 31-2, 41-3
hydropiperoides Mx. 31-2, 41
lapatifolium L. 32
 var. *incarnatum* Wats. Quite general.
maritimum L. 31-2
 o 1200 *muhlenbergii* Watson: 32-3
orientale L. 32
pennsylvanicum L. General.
 white-flowered form: 32, 43
persicaria L. 31-2, 41-3
ramosissimum Mx. 31-2, 81
sagittatum, L. 81
tenue Mx. 31-4
virginianum L. 31-3, 41, 81
 o *Rumex acetosella* L. 31-2
altissimus Wood: 41
britannica L. 2-3, 22, 31-3
 10 *conglomeratus* Murr. 32, 61, 71
crispus L. 31-3, 44
hastatulus Baldw. 31-3
obtusifolius L. 21
 var. *discolor* Wallr. 82
patientia L. 31-3, 44-5
persicarioides L. 21, 31
salicifolius Weinmann: 32-3, 43-3
venosus Rsn. 50
verticillatus L. 2
 20 *Saururus cernuus* L. 41
 SANTALACEÆ.
Comandra pallida A. DC. 41, 79, 86
umbellata N. 2-3, 31-3
Phoradendron flavescens N. 81-2
 o *Shepherdia argentea* N. 21, 32
 EUPHORBIACEÆ.
Acalypha caroliniana Walt. 33
virginica L. 31-2, 41
 var. *gracilens* Mueller: 31-4
Argyrothamnia humilis Muell. 66-7
mercurialina Muell. 72
 30 *Croton capitatus* Mx. 2, 31-4, 42-5, 51, 56
glandulosus L. 31, 41, 84 [1231

EUPHORBACEÆ, CONT.

- 1232 *Croton monanthogynus* Mx. 31-4, 43
texensis Muell. 37, 56
Crotonopsis linearis Mx. 31-2
Euphorbia corollata L. Eastern Kansas.
cyparissias L. 32
dentata Mx. 31-5, 43-4, 47
dictyosperma F. & M. 31-4, 43-4
fendleri T&G. SW. Kansas.
40 *geyeri* Eng. 43, 81
glyptosperma Eng. 31-4, 34
heterophylla L. 32, 45
hexagona N. 31-4, 40, 56, 66-7
humistrata Eng. 31-2, 56, 65, 6
lata Eng. SW. Kansas.
maculata L. 31-4, 43
marginata Psh. General thro' the state.
montana Eng. 34, 56
obtusata Psh. 23, 31
50 *petaloidea* Eng. 34-5, 66-7
preslii Gussone: 31-4, 43, 81
revoluta Eng. 32-4
serpens HBK. 31-4, 41 2
serpyllifolia Pers. 31-2
* *zygophylloides* Boiss. 31-2, 41, 47, 84
Phyllanthus carolinensis Walt. 41
Stillingia sylvatica L. 83
Tragia nepetæfolia Muell. 31-2, 41-2
var. ramosa Muell. 25-6, 31-4
60 *stylaris* Muell. 33-4

URTICACEÆ.

- Bœhmeria cylindrica* Willd. 33, 44, 81
o *Cannabis sativa* L. 21-2, 31-4, 41
Celtis occidentalis L. Widely distributed.
Humulus lupulus L. 1-3, 21-3, 31-4, 41-3
Laportea canadensis Gaudichaud: 31-3
Ioxylon pomiferum Raf. 22, 32, 41, 51-81-2
Morus rubra L. In nearly every district.
Parietaria pennsylvanica Muhl. 2 31-4 41 47
Pilea pumila Gr. 31-3
70 *Ulmus americana* L. Everywhere.
fulva Mx. Nearly everywhere.
racemosa Thomas: 81
Urtica dioica L. 2-3, 31-2
gracilis Ait. 2-3, 31-3, 41 2
urens L. 2-3, 31

JUGLANDACEÆ.

- Carya alba* Nutt. = *Hicoria ovata*.
amara Nutt. = *H. minima*.
pecan Nutt. = *Pacania olivæformis*.
porcina Nutt. = *Hicoria glabra*.
tomentosa Nutt. = *H. alba*.
Hicoria alba Britton: Mockernut: 31-2, 81-2
* *aquatica* Britt. Swamp Hickory: 81
1278 *glabra* Britt. Pignut: From 3, 24, 35,
44, 54, 64, 74, 84 east.

- 1279 *Hicoria minima* Britt. Bitternut: 1-3,
21-3, 31-3, 41-2, 51
80 *ovata* Britt. Shagbark Hickory: From
3, 23, 33, 42, 51 east.
sulcata Britt. Big Shellbark: 31-2, 41
Juglans cinerea L. Butternut: 62, 71
nigra L. Black Walnut: From 100° east.
Pacania olivæformis Raf. Pecan: 41 to 81-3

CUPULIFERÆ.

- Alnus incana* Willd. Hoary Alder: 31, 41
Betula nigra L. Red Birch: 81-2
Carpinus caroliniana Walt. Blue Beech: 51
Corylus americana Walt. Hazel: 1-3, 21-2,
31-3, 41-2, 51
Ostrya virginica Willd. Hop Hornbeam:
21-2, 31, 32 (one tree—Daniels), 41
90 *Quercus alba* L. White Oak: 1-6, 21-5, 31-4,
41-3, 51-2
bicolor Willd. Swamp White Oak: East
of 7, 27, 46, 55, 64, 73, 83
coccinea, var. tinctoria Gr. Quercitron
Oak: 1, 21-2, 31-3, 41-
ilicifolia Wang. Black Scrub Oak: 1-2,
21-2, 32
imbricaria Mx. Shingle Oak: From 4,
24, 33, 43, 52, 62 east.
macrocarpa Mx. Bur Oak: 1-6, 21-7,
31-5, 41-6, 51-5, 61-4, 71-4, 81-5
muhlenbergii Eng. Chestnut Oak: 31-2
nigra L. Black Jack: 1-3, 21-2, 31-3,
41-2, 51, 61
palustris Du Roi. Pin Oak: 41, 51, 61
prinoides Willd. Dwarf Oak: 31-3
1300 *rubra* L. Red Oak: 32, 41-3
stellata Wang. Post Oak: 1, 21, 31

SALICACEÆ.

- o *Populus alba* L. 31-2
monilifera Ait. Everywhere.
forma angulata: 32, 43, 56
Salix cordata Muhl. Heart-leaved Willow:
21-2, 31-3
var. angustata Andersson: 32, 81, 86
var. vestita And. Diamond Willow:
23, 32-3
discolor Muhl., *var. eriocephala* And.
Silky Willow: 22, 32, 65, 68, 81
humilis Marsh. Prairie Willow: 33, 56
longifolia Muhl. River-bed Willow: 2,
21-4, 31-3, 68, 88
10 *lucida* Muhl. Shining Willow: 31
nigra Marsh. Black Willow: General.
petiolaris Sm., *v. gracilis* And. Limber-
twig Willow: 32
tristis Ait. Dwarf Willow: 31-2, 41

CERATOPHYLLACEÆ.

- Ceratophyllum demersum* L. 31 [1314

Apetalous exogens 186
Total number of species of exogens, including two conifers 1315

CONIFEROUS EXOGENS.

CONIFERÆ.

- 1315 *Juniperus virginiana* L. Red Cedar: 3, 6-7, 22, 32, 46, 53-4, 61, 64, 72-4, 83-4, 86-7.
Once quite plentiful in some places; but now scarcely a sign of a tree to be seen in some of the districts here enumerated.
- Pinus mitis* Mx. Yellow Pine: 51, 61, 71, 81. Quite rare anywhere, though growing freely wherever planted.

Coniferous exogens (included in footing on previous page) 2

FLORIFEROUS ENDOGENS.

ARACEÆ.

- 1317 *Acorus calamus* L. 1, 21,
Arisæma dracontium Schott. NE. Kansas.
polymorphum Buckl. 2, 32-3
20 *triphylllum* Torr. Eastern Kansas.

LEMNACEÆ.

- Lemna minor* L. 31, 33, 41, 51
perpusilla Torr. 31-2
Speirodela polyrrhiza Schleiden: 33, 47
Wolffia columbiana Karsten: 42

TYPHACEÆ.

- Sparganium eurycarpum* Eng. 31, 41
androcladum Morong: 31-2
Typha angustifolia L. 65
latifolia L. 1-2, 21-2, 31-4, 56, 65, 75

NAIADACEÆ.

- Naias flexilis* Rostkow & Schmidt: 31, 43
30 *Potamogeton amplifolius* Tuck. 41, 47, 81
fluitans Roth. 31
heterophyllum Schreb. 41
hybridus Mx. 31, 81
nataus L. 31, 67
pauciflorus Psh. 31-2
pectinatus L. 31
pusillus L. 31-2
rufescens Schrader: 41
spirillus Tuckerman: 33-4
40 *Scheuchzeria palustris* L. 45, 66
Triglochin maritima L. 5, 25, 45, 65-6
palustris L. 54-5, 31-2, 41
Zannichellia palustris L. 47

NYMPHÆACEÆ.

- Brasenia peltata* Pursh: 81
Castalia odorata Woodv. & W. 21, 41, 51, 81
pink variety: 21
Nelumbo lutea Pers. 21, 31
Nuphar advena Ait. 51-2, 56, 81

ALISMACEÆ.

- Alisma plantago* L. 2, 31, 33
50 *Echinodorus parvulus* Eng. 2, 31
rostratus Eng. 2, 31, 47

- 1352 *Echinodorus radicans* Eng. 52
Sagittaria graminea Mx. 44, 82
variabilis Eng. 2-3, 31-3, 43, 56, 81

HYDROCHARIDACEÆ.

- Elodea canadensis* Mx. 2, 31, 41
Limnubium spongia Richard: 31
Vallisneria spiralis L. 41

ORCHIDACEÆ.

- Corallorhiza multiflora* Nutt. 31
Cypripedium parviflorum Salisbury: 31, 41
60 *Habenaria leucophæa* Gr. 1-3, 21-3, 31, 41
Orchis spectabilis L. 31
Spiranthes cernua Richard: 41, 56
gracilis Bigelow: 31
præcox Wats. 33, 52

AMARYLLIDACEÆ.

- Agave virginica* L. 81-2
Cóoperia drummondii Herbert: 82 (Plank)
Hypoxys erecta L. 2, 31, 41

IRIDACEÆ.

- 2 *Belamcanda chinensis* Adanson: 2, 21, 31-2
Iris versicolor L. 2, 31-2
70 *Nemastylis geminiflora* N. 61-2, 72
Sisyrinchium anceps Cav. 2, 31-2, 56, 81
angustifolium Mill. 2-3, 23, 31-3, 41-3
forma albidum: General.

DIOSCOREACEÆ.

- Dioscorea villosa* L. 41, 51

SMILACACEÆ.

- Smilax bona-nox* L. 81
glauca Walt. 32, 61-2, 71, 81
herbacea L. 32, 51, 61
hispida Muhl. Eastern Kansas.
pseudo-china L. 32
80 *rotundifolia* L. 2, 31-3, 43-5, 51, 56

LILIACEÆ.

- Allium canadense* Kalm: 31-2, 43, 56, 81
cernuum Roth. 56, 81
mutabile Mx. 43-6, 55-6, 64, 74, 81 [135]

LILIACEÆ, CONTINUED.

- 1384 *Allium nuttallii* Watson: 45, 47, 55-6
reticulatum Fraser: 23, 31-3, 43, 56
stellatum Nutt. 32, 41-2, 55-6
striatum Jacq. General.
Amianthium muscætoxicum Gr. 73-4
Androstephium violaceum Torr. 64, 74
 °90 *Asparagus officinalis* L. 2, 32
Camassia fraseri Torr. 2, 31-2, 41-3
Chamælerium carolinianum Willd. 31
Erythronium albidum N. 31-3, 41-2
americanum Smith: 32-4
mesochoreum Kner, n. sp.: Vide p. 26
 ° *Hemerocallis fulva* L. 32
Lilium philadelphicum L. 1, 21
superbum L. 1, 21, 31,
 ° *tigrinum* Ker: 31-2, 56
 1400 *Melanthium virginicum* L. 31
Oakesia sessilifolia Wats. 21, 31
Polygonatum biflorum Ell. 2, 31
giganteum Dietrich: 2, 31-3, 43, 56
Smilacina racemosa Desf. 1-3, 21-3, 31-2, 42
stellata Desf. 31-3, 43, 56
Streptopus amplexifolius DC. 82
Trillium erectum L. 41
Uvularia perfoliata L. 1-2, 21, 31, 41
Yucca angustifolia Psh. Western Kansas.

- 1410 *Zygadenus elegans* Pursh: 32, 43
nuttallii Gray: 33
 COMMELYNACEÆ.
Commelyna hirtella Vahl. 41
virginica L. Quite general.
Tradescantia virginica L. Universal.
 roseate and white-fl'd forms: 56
 var. *pilosa* Lehm. 2-3, 22, 31-3, 44, 47

- PONTEDERIACEÆ.
Heteranthera graminea Vahl. 31, 33, 51
reniformis Ruiz & Pavon: 31, 33
Pontederia cordata L. 52

- JUNCACEÆ.
Juncus acuminatus Mx. 81
 20 *articulatus* L. 31, 56, 81
bufonius L. 31
canadensis J. Gay: 31-2
filiformis L. 32
littoralis Eng. 23, 56
marginatus Rostk. 23, 31, 56
nodosus L. 31
 var. *megacephalus* T. 31-2, 56, 67
scirpoides Lam. 31
 var. *polycephalus* Eng. 3-2, 72
 30 *tenuis* Willd. 1-3, 32
Luzula campestris DC. 1 [1431
Floriferous endogens.....115

GLUMIFEROUS ENDOGENS.

CYPERACEÆ.

[A provisional list. It is hoped that next edition will contain a more complete and correct list, showing localities more fully.]

- 1432 *Carex aquatilis* Wahl. 32
aurea Nutt. 32
cephaloidea Dewey: 1, 2:
cephalophora Muhl. 31
conjuncta Boott: 21
conoidea Schkuhr: 32, 45
crinita Lam. 81
cristata Schweinitz: 47
 40 *crus-corvi* Shutt. 32
davisii Schw. & Torr. 31
deweyana Schweinitz: 32
douglasii Boott: 56
eburnea Boott: 23, 33
echinata, v. *microstachys* Boeckl. 21
emmonsii Dewey: 23, 31, 33
filiformis L. 44
 var. *latifolia* Boeckl. 31-2
flava L., var. *graminis* Bailey: 32
 50 *fusca* Allioni: 81
gracillima Schw. 2, 21, 32
granularis Muhl. 31
gravida L. H. Bailey: 32
grayii Carey: 32, 45
grisea Wahl. 45
 var. *globosa* Bailey: 32, 43
hitchcockiana Dew. 21, 31
houghtonii Torr. 21, 31

- 1459 *Carex hystricina* Willd. 32, 45, 81
 60 *laxiflora* Lam. 31-2
 var. *latifolia* Boott: 32
 var. *striatula* Carey:
 var. *varians* Bailey: 32
longirostris Torr. 2
lurida Wahl. 45, 81
marcida Boott: 27
mirabilis Dew. 32
muhlenbergii Schk. 31-2
 70 *pennsylvanica* Lam. 2, 31
richardsonii R. Br. 45
riparia Curtis: 31-2, 45, 65
rosea Schk. 21
 var. *radiata* Dew. 32
 var. *retroflexa* Torr. 32
 var. *Texensis* Torr. 81
scoparia Schk. 31, 56
shortiana Dew. 32, 81
sparganioides Muhl. 21
squarrosa L. 81
 80 *stenolepis* Torr. 31-2
stenophylla Wahl. 32
straminea Willd. 31-2
 var. *brevior* Dewey: 32, 41, 51
 var. *tenera* Boott: 32
stipata Muhl. 21
stricta Lam. 31-2
 var. *angustata* Bailey: 31-2
 var. *decora* Bailey: 31-2
tenella Schkuhr: 32

CYPERACEÆ, CONT.

- 1490 *Carex polytrichoides* Muhl. 32
teretiuscula Good.
tetanica Schk. 21, 31-2
 var. *Meadii* Bailey: 41, 51
tribuloides Wahl., v. *turbata* Bail. 32
triceps Mx., var. *hirsuta* Bailey: 32, 41
trichocarpa Muhl. 32, 43
 var. *aristata* Bailey: 56
umbellata Schk., var.
varia Muhl.
 1500 *utriculata* Boott: 31-2
vulpinoidea Mx. 2-3, 23, 31, 45
 var. *setacea* Dew. 2
- Cladium mariscoides* Torr. 32, 56
- Cyperus acuminatus* Torr. 31-2, 43-5, 59
aristatus Rottbœll: 32-3, 56
carruthii Wood, n. sp. 61 (see page 26)
diandrus Torr. 31-2, 43-5, 56
 ♪ *echinatus* Britt. 51
erythrorhizos Muhl. 31-2
 10 *esulentus* L. 31-2, 42, 55-6, 65, 74
filiculmis Vahl. 31-2
houghtonii Torr. 74
rotundus L. 32, 55-6
 * *speciosus* Vahl. 31-2
schweinitzii Torr. 31-3, 55
spiculatus Wood, n. sp. 53 (see p. 26).
strigosus L. 31-2
- Dulichium spathaceum* Pers. 32
- Eleocharis acicularis* R. Br. 32, 45, 68
 20 *compressa* Sullivant: 45
engelmannii Steud. 31-2
intermedia Schultes: 31-2, 47
ovata R. Br. 31-3, 56
palustris R. Br. 32, 56
quadrangulata R. Br. 81
rostellata Torr. 47
tenuis Schultes: 31-2
- Eriophorum cyperinum* L. 31-2
gracile Koch:
 30 *lineatum* B. & H. 31-2, 47
virginicum L. 32
- Fimbristylis autumnalis* R. & S. 31-2
capillaris Gray: 31-2
 ♪ *spadicea* Vahl. 45, 65, 88
- Fuirena squarrosa* Mx. 32, 45, 65, 74
Hemicarpha subsquarrosa Nees: 31-2
- Kyllinga pumila* Mx. 32-3
- Rhynchospora alba* Vahl. 32
capillacea Torr. 31-2
 40 *corniculata* Gr. 32, 41, 65
cymosa Nutt. 32, 65
glomerata Vahl. 32
macrostachya Torr. 65
- Scirpus atrovirens* Muhl. 31-2, 45, 47
debilis Pursh: 31-2
fluviatilis Gray: 31-2, 43-7, 56, 65, 76, 88
lacustris L. All over the state.
maritimus L. 32, 43, 54, 65
olneyi Gray: 65
 50 *polyphyllus* Vahl. 31-2
pungens Vahl. 43, 54-6, 65, 74
torreyi Olney: 32, 45
- Scleria triglomerata* Mx. 32
 1554 *verticillata* Muhl. 32-3 (*Cyperacea*, 124

GRAMINEÆ.

- 1555 *Agropyrum caninum* Roem. & Schult. 33
glaucum R&S. 31-3, 45, 56, 65, 67, 76
repens Beauvois: Distribution general.
tenerum Vasey: 32-3, 56
violaceum Beauv. 31-2, 45, 56
- *Agrostis alba* L. 31-2, 45
 61 *caniña* L. var. 48-9
exarata Trinius: 32-3
perennans Tuck. 32-3
scabra Willd. 31, 45
 ◦ *vulgaris* Withering: 22, 31-3
- Alopecurus alpinus* Smith: 45 ?
aristulatus Mx. 32-2, 43-5
geniculatus L. 33, 45, 56
pratensis L. 32-3
- Andropogon avenaceus* Mx. Quite general.
 71 *furcatus* Muhl. Universal.
 ◦ (*Sorghum*) *halapense* (Pers.): 41, 68, 81
hallii Hackel: 68-9, 77-9, 86-9
laguroides DC. 56, 67
macrourus Mx. 67-8, 76-9, 88
saccharoides Swz. 47, 67-9, 76-9, 86-9
scoparius Mx. Everywhere.
virginicus L. 31, 41, 47, 56
- *Anthoxanthum odoratum* L. 32-3
- Aristida basiramea* Eng. 2, 45
 * 81 *desmantha* Ruprecht: 85-6, 88
dichotoma L. 45, 51, 81
gracilis Ell. 45
oligantha Mx. In nearly every district.
purpurascens Poir. 45, 56
purpurea N. 32, 45, 56
 var. *longiseta* Vasey: 45, 56
ramosissima Eng. 45, 61
stricta Mx. 33, 45
 90 *tuberculosa* N. 45
- Asprella hystrix* Willd. 31, 45
- Bouteloua hirsuta* Lag. 31-2, 45, 56, 66, 85
oligostachya Torr. General.
racemosa Lag. General, not common.
 var. *aristosa* Gr. 31-3, 43, 56
- Brachyelytrum aristatum* Beauv. 31
 var. *Engelmanni* Gray: 31-2
- Bromus ciliatus* L. 31-3, 41-5, 56
 var. *minor* Munro: 45
- 1600 *kalmii* Gr. 32-3, 42-3
 ◦ *mollis* L. 32-3
 ◦ *racemosus* L. 31-2
 ◦ *secalinus* L. 31-4, 43-5, 53, 63
 * *unioloides* Willd. (Kell.)
- Buchloe dactyloides* Eng. Once everywhere on the dry prairies of Kansas; now scarce east of long. 97°.
- Calamagrostis canadensis* Beauv. 31
confinis N. 32
Calamovilfa longifolia Hack. 56, 66, 63
Cenchrus tribuloides L. Universal.
Chloris verticillata N. 45, 56, 65-8, 74-8, 82-8
Cinna arundinacea L. 41, 45
 1612 *pendula* Trin. 81

GRAMINEÆ, CONTINUED.

- *1613 *Cynodon dactylon* Pers. 81
- *Dactylis glomerata* L. 31-4
- Danthonia spicata* Beauv. 22-4, 32-3
- Deschampsia cæspitosa* Beauv. (?)
- flexuosa* Trin. 22-3, 32-5
- Diarrhena americana* Beauv. 31
- Diplachne fascicularis* Beauv. 31-2, 45
- rigida* Vasey: 88 (Kellerman)
- Distichlis spicata* Greene: SW. K. in saline
- 21*b* trailing form: 56, 65, 74 [soils.]
- var. stricta* Thurber: 56, 65, 67, 88
- Eatonia obtusata* Gr. 31-3, 45, 82
- pennsylvanica* Gr. 31-3, 56, 84
- Eleusine indica* Gaert. 31-2, 45
- Elymus canadensis* L. General.
- sitanion* Schultes: Western Kansas.
- striatus* Willd. General.
- virginicus* L. General.
- Eragrostis capillaris* Nees: 31-3
- 31 *curtipedicellata* Buckl. 78, 86, 88
- frankii* Meyer: 33, 65-9, 76-9, 81, 85-8
- interrupta* Nutt. 65-6, 88
- *major* Host. In nearly every county.
- pectinacea* Gray: 31-3
- *pilosa* L. 31-2
- purshii* Schrad. 32-3, 43-5, 66, 76-7, 84
- reptans* Nees: 32-3
- tenuis* Gray: 33, 45, 65, 68, 76, 85, 88
- Eriochloa polystachya* HBK. 85, 87-9
- *Festuca elatior* L. 32, 41
- 42 *var. pratensis* Gr. 32-3
- nutans* Willd. 31-4, 44-6
- var. Shortii* Wats. 31-3
- ovina* L. 31-2
- var. duriuscula* Koch: 31-2, 45, 47
- tenella* Willd. 31-4, 45, 47, 56
- Glyceria canadensis* Trin. 31-2, 56, 65-6, 74
- fluitans* R. Br. 33, 65, 74
- 50 *grandis* Wats. 31-3
- nervata* Trin. 31-3
- Gymnopogon racemosus* Beauv. 82
- Hordeum jubatum* L. 32, 43-5, 56, 65
- nodosum* L. General.
- * *pusillum* Nutt. 32, 42, 53-6, 64-5
- Kæleria cristata* Pers. In every county.
- var. gracilis* Gr. General.
- Leersia lenticularis* Mx. 32-4
- oryzoides* Swz. 31-2, 45
- 60 *virginica* Willd. 31-2, 45, 81
- Leptochloa mucronata* Kth. 31-2, 51
- var. filiformis*: 41
- *Lolium perenne* L. 32-3
- Melica diffusa* Pursh: 31-3
- mutica* Walt. 31-2
- Muhlenbergia capillaris* Kth. 82
- comata* Benth. 67-8, 79, 88
- debilis* Thurb. 88
- diffusa* Schreber: 31-2, 45
- 1670 *racemosa* B.S.P. Universal.
- 1671 *Muhlenbergia mexicana* Trin. General.
- gracilis*, *var. brevistarata* Vasey: 64
- pungens* Thurb. 49, 68-9, 78
- sobolifera* Trin. 31, 45
- sylyatica* T. & G. 32, 45
- willdenovii* Trin. 81
- Munroa squarrosa* Torr. 46-9-87-9
- Oryzopsis cuspidata* Benth. 79
- melanocarpa* Muhl. 81
- Panicum agrostoides* Muhl. 81
- * 81 *altissimum* Jacq. 33
- anceps* Mx. 33, 41
- autumnale* Bosc. 32, 45, 56
- capillare* L. 31-3, 45, 56, 81
- clandestinum* L. 2, 23, 31-3, 45-7
- crus-galli* L. In every district.
- var. hispidum* Gr. 31-2, 43-5, 56
- dark purple* form: 23, 32, 56
- var. muticum*: 55-6, 65-6, 77-9, 85-9
- purple variegated* form: 79
- var. walteri*: 51, 81, 83
- 90 *depauperatum* Muhl. 45
- dichotomum* L. 31-2, 45
- var. pubescens* Lam. 31
- filiforme* L. 32
- *glabrum* Gaudin: 32
- latifolium* L. 81
- microcarpon* Muhl. 32
- var. sphaerocarpon* Vasey: 31
- proliferum* Ell. 31-2
- *sanguinale* L. 31-2
- 1700 *scoparium* Lam. 31-2, 45
- virgatum* L. 31-3, 81
- var. diffusum* Vasey: SW. K.
- viscidum* Ell. 32-3
- Pappophorum apertum* Munro: 88-9 (Kell.)
- Paspalum fluitans* Kth. 41
- læve* Mx. 2-3, 26, 31-3, 56, 81
- setaceum* Mx. 31-3
- var. latifolium* Wood: 64, 74
- var. platyoxon* Doell: 81
- Phalaris arundinacea* L. 31, 44
- 11 *canariensis* L. 31-2
- *intermedia* Bosc. 81
- *Phleum pratense* L. 22, 32-3
- Phragmites communis* Trin. 12, 21, 31-4, 68
- Poa alsodes* Gray: 2-3, 23, 32-3
- andina* Nutt. 45 (Henry)
- annua* L. 45, 56
- compressa* L. 31-2, 56
- flexuosa* Muhl. 31-3
- 20 *pratensis* L. 22, 31-3, 41, 51, 61-2, 71-2
- serotina* Ehrh. 31-3, 43-5, 55-6
- sylvestris* Gray: 31
- tenuifolia* Nutt. 45, 49
- *trivialis* L. 21
- Polypogon littoralis* Sm. 45
- Puccinellia distans* Parlatores: 32-3
- Redfieldia flexuosa* Vasey: 67-9, 77-9, 88-9
- Schedonnardus paniculatus*: 31-3, 42-5, 53
- *Setaria glauca* Beauvois: 1-2, 21-2, 31-3, 43
- 1720*b* red bristled form: 32

GRAMINEÆ, CONT.

- 1730 *Setaria italica* Kunth: 21, 31-3
 * *perennis* Hall, *n. sp.*: 45, 65, 76-7, 88
 ° *verticillata* L. 33 [(see below).
 ° *viridis* Beauv. 31-3
Spartina cynosuroides Willd. General.
gracilis Trin. 65, 87
juncea Willd. 31-2, 45, 65
polystachya Willd. 45 (Henry)
Sporobolus airoides Torr. 25, 32, 56
arkansanus Trin. 88 (Kellerman)
 40 *asper* Kth. 31-2, 45, 51
asperifolius Thurb. 47, 67-9, 78
confusus Vasey: 68-9
cryptandrus Gray: 31-4, 45, 66-9, 75-8
cuspidatus Torr. 31, 34
depuperatus Torr. 41, 52, 56
heterolepis Gray: 31
 1747 *indicus* R. Br. 31
 1748 *Sporobolus pilosus* Vasey, *n. sp.* 76 (see below).
tricholepis Vasey: 88
 50 *vaginæflorus* Torr. 31, 45
Stipa avenacea L. 32-3
comata Trin. & Rupr. 88 (Kell.)
 * *spartea* Trin. 31-2, 43-5, 56
viridula Trin. 32-3
Triodia acuminata Benth. 66-7
ambigua Benth. 32-3
 ° *cuprea* Jacq. 31-3, 43-5, 56, 81
purpurea Hack. 31
 59 *stricta* Vasey: 81
Tripsacum dactyloides L. 31-3, 45, 56
var. monostachyon Gr. 45, 56
Trisetum interruptum Buckl. 88-9
Uniola latifolia Mx. 31-3, 81
 1764 *Zizania aquatica* L. 41 (*Gramineæ*, 210
Glomeriferous endogens..... 334

NEW SPECIES.

- 1395 **ERYTHRONIUM MESOCHOREUM** Knerl, *n. sp.* Leaves lance-linear, bright green beneath a faint bloom, never mottled with purplish blotches, averaging $\frac{1}{2}$ ' to $\frac{3}{4}$ ' wide by 6' to 8' and sometimes 10' long; perianth white, tinged a delicate lavender along the veins, and with a yellow blotch toward the base, half reflexed when in full bloom, 1' to 2' long; style slender, club-shaped, arising at a slight angle or almost straight from the ovary; stigmas three, recurved, distinct; ovary oblong, bluntly triangular, with sides convex; ovules oblong ovoid; capsules oblong or elongated obovate, $\frac{3}{4}$ inch to 1 $\frac{1}{4}$ inches long; sterile plants with but one leaf appearing later than the fertile two-leaved forms and few in comparison; corm more or less elongated, consisting of several, one within the other, the outermost enlarging for next year's plant; (no underground runners producing corms at their extremities as in *E. albidum*). Open grassy hill-tops and north-facing slopes as well as in like wooded localities, March and early April, Atchison county, Kansas.
 1506 **CYPERUS CARRUTHII** Wood, *n. sp.* Biennial; culms triquetrous, slender, 6 inches high, the leaves longer. Umbel simple, almost capitate. Spikes 4-6 flowered, 2 to 3 lines long, terete, very acute. Rhachis with short, trigonous, winged joints. Allied to *C. michauxianus* Schult.—*Trans. Kans. Acad. Sci., Vol. VII.*
 1514 **CYPERUS SPICULATUS** Wood, *n. sp.* Culm tall, glabrous, triquetrous; involucre of about 7 very long, flat leaves, rough-edged; umbel 8-rayed, rays very unequal, each having from 3 to 7 simple or sub-compound spikes; spikes cylindrical, 1' long or less, with fifty to one-hundred spikelets; spikelets minute, teretish, $1\frac{1}{2}$ lines long, 8 to 10-flowered; glumes closely imbricated, mucronulate, the midvein green; stamens 3, style equaling the glume, with 3 short stigmas; rachis slightly winged.—*Trans. Kans. Acad. Sci., Vol. V.*
 1728 **SETARIA PERENNIS** Hall, *n. sp.* Culm ascending or erect, 3 to 7 dm. high; spike cylindrical, simple, green, 2 to 7 cm. long; bristles few, little longer than the spikelets. Propagates freely by slender perennial rootstocks, and seldom ripens seed where cattle freely graze. Frequent in damp alkaline and saline bottoms in central and southwestern Kansas. Perhaps a form of *S. caudata* R. & S.
 1745 **SPOROBOLUS PILOSUS** Vasey, *n. sp.* Perennial, from thick roots; whole plant pale green; culms cespitose, rigid, erect, about $1\frac{1}{2}$ ft. high, leafy, particularly at the base, mostly simple; sheaths smooth, the uppermost sheathing the base of the panicle, the lower crowded and flattened; ligule inconspicuous; the throat, margin, and both sides of the lower blades pilose, the upper ones involute and attenuated to a long point, shorter than the culm; panicle terminal, spike-like, 2 to 3 inches long, close, the lower part included in the sheath; spikelets $2\frac{1}{2}$ lines long, smooth, the lower empty glume $\frac{1}{4}$ shorter than the upper, which equals the fl. gl. and palet, all obtuse.—Resembles *S. asper*, which has the leaves longer than the culm, both empty glumes shorter than the flower, and the leaves smooth or not pilose. Collected in Kansas by B. B. Smyth.—*The Botanical Gazette, January, 1891.*

Number of species and specific varieties of flowering plants..... 1764

SPOROPHYTA,

Flowerless Plants.

VASCULAR ACROGENS.

FILICOIDS.

EQUISETACEÆ.

- 176, *Equisetum arvense* L. 31-2, 56
hyemale L. 31-2
lævigatum Braun: 45
limosum L. 56
robustum Braun: 31, 45
sylvaticum L. 31
pratense Ehrh. 31-2, 56

MARSILIACEÆ.

- 177: *Marsilia vestita* Hook. & Grev. 41, 43, 56

LYCOPODIACEÆ.

- Lycopodium clavatum*, L. 5 (?)

SELAGINELLACEÆ.

- Isoetes melanocarpa* J. Gay: ?

- Selaginella rupestris* Spring. ?

FILICES.

Principally on the authority of Rev. James Wilson of Leavenworth, with additions by Prof. F. W. Cragin of Washburn College, Topeka, and Prof. J. H. Carruth of Lawrence.

POLYPODIACEÆ.

- 1775 *Adiantum pedatum* L. Maidenhair Fern. Shady ravines, 2, 21, 31-3, 41, 81; rare.
Aspidium acrostichoides Swartz: Christmas Fern. By streams, 62, 81-3; not common.
goldianum Hook. Goldie's Fern. Shades, 21, 31; not common.
marginale Swz. Shield Fern. Crevices of rocks, 62-3, 83; plentiful.
noveboracense Willd. 21
 80 *spinulosum* Willd. Shield Fern. 31; rare. (Carruth.)
thelypteris Swz. Marsh Fern. Ravines, 22; Rare.
Asplenium angustifolium Mx. Narrow-leaved Spleenwort. River banks, 21, 31; rare.
ebeneum Ait. Base of mossy rocks, 62, 72-3, 82-4; occasional.
fili-femina Bernhart: Lady Fern. 21; rare.
parvulum Mart. & Gale: 83; occasional.
trichomanes Link. Crevices of limestone rocks, 62; not common.
Camptosorus rhizophyllus Lk. Walking Fern. Top of limestone bluffs, 1, 21, 31-3, 71-2
 81-2; frequent.
Cheilanthes lanuginosa N. Lip Fern. 35, 56; quite rare. (Found at "Rock City," Ottawa county, by Mr. S. C. Mason, and sandstone bluffs along Cow creek in northern Barton county by Mrs. D. J. Evans.)
vestita Swz. Lip Fern. About moss-covered rocks, 62; frequent.
 90 *Cystopteris fragilis* Bernh. Wood Fern. Woody north slopes, 21-2, 31-3, 41, 51-2, 61-2,
 72-3, 81-3; very common.
Notholæna dealbata Kunze: Calcimine Fern. Northeast face limestone bluffs, 23, 32,
 41, 43, 61-2, 82, 84; rare.
nivea Desvaux: Little Snowy Fern. Reported from Neosho county.
Onoclea sensibilis L. Sensitive Fern. Low, damp places, 31-2, 62; not common.
Pellæa atropurpurea Link: Cliff Brake. Limestone bluffs, 2, 21-3, 31-3, 41-3, 61-2, 72-3,
 81-4, 86-7, frequent.
wrightiana Hook. Wright's Cliff Brake. Same habitat, 35; very rare. (Cragin.)
Phegopteris dryopteris Fee: Ternate Beech Fern. Cliffs, 43; rare.
hexagonoptera Fee: Beech Fern. 51; very rare.
Polypodium incanum Psh. Resurrection Fern. Mossy bark of trees, 52, 62, 71-3; rare.
 1800 *vulgare* L. Rock Polypod. Shady rock sides, 43; not common.
Struthiopteris germanica Willd. Ostrich Fern. 31; very rare. (Carruth.)
Woodsia obtusa Torr. Rock Fern. 12, 21-3, 31-2, 51-2, 61-2, 72, 83; frequent.

OPHIOGLOSSACEÆ.

- Botrychium ternatum* Swz. Moonwort. Among hazel brush, 21, 51; rare.
 1804 *virginicum* Swz. Rattlesnake Fern. Hazel thickets, 1-2, 21-2, 31-2, 41; abundant.

Vascular acrogens.....42

CELLULAR ACROGENS.

BRYÆ—MOSSSES.

(PRELIMINARY LIST.)

The compiler has no apology to offer for presenting this list; something must be done some time if a list of the mosses of the state is ever prepared; and no bryologist has as yet appeared to work up a complete list. The field is not a very fruitful one; perhaps that accounts for it. Errors, as they are discovered, will be corrected in future editions. The principal collectors are:

Mrs. E. H. Newman, No. 14 Woodlawn avenue, Potwin Place, Topeka.	Miss Mara Becker, Netawaka, Brown Co.
Professor F. W. and Mrs. Cragin, Colorado Springs, Colo.	J. D. Hatcher, Long Island, Phillips Co.
Jerry M. Fields, Alma, Wabaunsee Co.	Joseph Henry, Salina (since died).
S. A. Baldwin, Wabaunsee.	Dr. W. S. Newlon, Oswego.
	Prof. J. H. Carruth, Albuquerque, N. M.
	Rev. John Bennett, Kansas City, Kan.

The principal authority is Eugene A. Rau, Bethlehem, Pa., as published in the *Bulletins of Washburn College Laboratory of Natural History*, with a few additions on the authority of Prof. Elihu Hall of Athens, Ill., Prof. Leo Lesquereux, Columbus, O., both now dead, and Prof. T. C. Porter, Lafayette Coll., Easton, Pa., also a few original collections.

ACROCARPI--Fruit terminal.

PHASACEÆ.—Capsule sessile.

- 1805 *Ephemerum spinulosum* Bruch & Schimper: Moist clay ground; common.
 6 *Phascum carniolicum* Weber & Mohr: Sandy ground, W. Kansas (Prof. E. Hall).
 7 *cuspidatum* Schreber: Dry soil, along fences, etc., eastern Kansas.
 8 var. *piliferum* Bruch & Schimp. Same habitat.

FUNARIACEÆ.—Capsule nodding, gibbous. Calyptra tetragonal. Peristome none or of 16 teeth, twisted to the right, sometimes with a slight inner membrane.

- 1809 *Physcomitrium acuminatum* Bruch & Schimp. Moist grounds, N. K. (Rau.)
 10 *pyriforme* Bridel: Prairies, E. K., very common; fruits in spring.
 11 *tetragonum* Bruch & Schimp. Sandy plains, W. K. (Prof. Hall).
 12 *Funaria hygrometrica* Sibthorpe: Bare moist sandy ground, E. K.; common.

POTTIACEÆ.—Capsule narrowly oval or cylindrical. Peristome of 16 flat teeth, bifid or divided into 32 terete filiform segments, often twisted.

- 1813 *Barbula cæspitosa* Schwaegr. Tree roots on hillsides; common.
 14 *fallax* Hedw. Rocks, earth, etc.; frequent.
 15 *henrici* E. A. Rau, n. sp. (Bull. Washb. Coll. Lab. Nat. Hist. i, 172): "Dioecious? plants short, branched, closely cespitose, caespitose from the white excurrent costæ; leaves concave, short spatulate; costæ keeled, filamentose, near apex of leaf, excurrent portion as long as the leaf, hyaline, serrate; areolation of leaves quadrate and chlorophyllose above, hyaline and elongated toward the base; leaves spreading when moist, imbricated when dry. Habitat: Rocks, Saline county (Joseph Henry). Although without fruit, it appears to be a distinct species belonging to the section *Chloronotæ*. It differs from *Barbula chloronotos*, Bruch, in its more caespitose appearance, shorter and more obtuse leaves, laxer areolation, longer excurrent and more serrate costæ. Plants bearing archægonia only were sent; it is therefore desirable to secure fruiting specimens to complete the diagnosis."
 16 *mucronifolia*, Bruch & Schimp. Lime rocks; frequent.
 17 *unguiculata*, Hedw. Danip loam, rocks, etc.; common.
 18 *Pharomitrium subsessile* Schimp. Open ground, stone walls, etc.; frequent.
 19 *Didymodon rubellus* Bruch & Schimp. Stones and ground, near water; frequent.
 20 *Leptotrichum pallidum* Hampe: Bare earth in woods; common.
 21 *tortile* Muell. var. *vaginans* Lesquereux: Clayey and sandy soils; common.
 22 *Trichostomum tophaceum*, Bridel: Moist lime rocks; common.

DICRANACEÆ.—Capsule long-pediceled, erect or nodding. Calyptra cucullate. Operculum rostrate. Peristome simple, of 16 flat entire or bifid teeth, or none.

- 1823 *Mollia viridula* Lindberg: On ground, eastern Kansas.
 24 var. *stenocarpa* Muell. Topeka.
 1825 *Dicranella heteromalla* Schimp. Rocks, clay banks; common.

DICRANACEÆ. CONTINUED.

- 1826 *Dicranella rufescens* Schimp. Clay banks; frequent.
 27 *varia* Schimp. Damp banks, E. K.; common.
 28 *Dicranum scoparium* Hedwig: SE. K. (Dr. W. S. Newlon)
 29 *undulatum* Turner: Damp shades; common.
 30 *Campylopus leanus* Sullivant: Soft, damp, woody earth; occasional.
 31 *henrici* Cardot, n. sp. (Botan. Gazette, August, 1888): Saline county (Henry)
 32 *Fissidens decipiens* DeNot. Lime rocks, etc.; frequent.
 33 *exiguus* Sulliv. Stones in moist and shaded banks, etc.; common.
 34 *minutulus* Sull. Moist rocks in shady woods and banks; common.
 35 *osmundioides* Hedw. NE. K. (Miss Mara Becker)
 36 *taxifolius* Hedw. Shaded clayey ground; common.
 37 *Leucobryum minus* Sull. Bluff ground in woods; June; frequent.
 38 *vulgare* Hampe: Roots of trees in damp woods; February; common.
 39 *Ceratodon purpureus* Brid. Common.
 40 *Seligeria pusilla* Bruch & Schimp. Shaded limestone rocks, E. K.

GRIMMIACEÆ.—Plants tufted. Capsule symmetrical, on a straight or curved pedicel. Calyptra mitriform. Peristome simple, of 16 transversely articulate teeth or double, the outer of 8 bigeminate or 16 geminate teeth, the inner of 8 or 16 simple filiform cilia or lanceolate segments.

- 1841 *Coscinodon wrightii* Sull. Rocks, W. K.; frequent.
 42 *Grimmia apocarpa* Hedw. Damp rocks, walls, etc.; common.
 43 *var. rivularis* Nees & Hornschuch: Rocks in water courses, E. K.
 44 *calyptrata* Hook.
 45 *conferta* Funck, *var. obtusifolia* Schimp. Face of dry shaded rocks; common.
 46 *var. compacta* Lesq. Same habitat.
 47 *leucophæa* Grevius: Dry sandstone rocks; frequent.
 48 *pennsylvanica* Schwægrichen: Rocks; common.
 49 *Hedwigia ciliata* Ehrh. Shaded or moist sandstone rocks; occasional.
 50 *Ptychomitrium incurvum* Sull. Sand rocks, SE. K.
 51 *pygmæum* Lesq. & James: Stones near streams, SE. K. (Prof. Hall)
 52 *Orthotrichum anomalum* Hedw. Lime rocks.
 53 *brachytrichum* Schimp. Trees; not common.
 54 *cupulatum* G. F. Hoffmann: Limestone rocks, W. K.
 55 *speciosum* Nees: Tree trunks; common.
 56 *strangulatum* Beauv. Trees; common.

BRYACEÆ.—Capsule globose, ovoid, or pyriform; nodding, horizontal, or pendent. Peristome double; teeth barred; segments of inner membrane separated by cilia.

- 1857 *Bartramia pomiformis* Hedw. Shady banks. SE. K.; rare.
 58 *Philonotis mühlenbergii* Brid. Springs in sand-hills, C. K.; frequent. (E. A. Rau)
 59 *Leptobryum pyriforme* Schimp. Shady ground, rotten wood, etc.
 60 *Webera albicans* Schimp. Damp sand, near water, NE. K. (Miss Becker)
 61 *annotina* Schwægr. Woods, E. K.; not common.
 62 *nutans* Hedw. Wet grounds, rotten logs, etc.
 63 *Bryum argenteum* Linn. Shades of hedges, etc., E. K.; common.
 64 *bimum* Schreb. Damp sandy ground, rocks, E. K. (Rau)
 65 *cæspiticium* Linn. Crevices of rocks; common.
 66 *pendulum* Schimp. Dead trunks; frequent.
 67 *pseudotriquetrum* Schwægr. Wet rocks, E. K.
 68 *Mnium affine* Bland: Shaded banks and hedge rows; common.
 69 *cuspidatum* Hedw. Damp ground, E. K.; common.
 70 *Timmia cucullata* Mx. On damp ground, E. K.

POLYTRICHACEÆ.—Plants woody. Capsule cylindrical or angular. Calyptra hairy. Peristome of 32 or 64 solid teeth.

- 1871 *Atrichum angustatum* B. & S. Gravelly soil in woods; common. (Rau)
 72 *undulatum* Beauv. Woods, E. K.
 73 *Polytrichum commune* Linn. NE. K.
 74 *juniperinum* Willd. Prairies, W. K.
 1875 *piliferum* Schreb. Sandy ground, W. K.

PLEUROCARPI--Fruit lateral.

LESKEACEÆ.—Capsule cylindrical or oblong, erect or curved. Peristome double, the outer of 16 long teeth, the inner of 16 cilia.

- 1876 *Leskea polycarpa* Ehrh. Base of trees, E. K., freq.; limestone bluffs, N. K. (Rau)
 77 *rostrata* Hedw. Woods, E. K.; not common. (Rau)
 78 *Thelia asprella* Sull. Base of trees, common.
 79 *Anomodon attenuatus* Hueben: Base of trees in bottoms, common.
 80 *obtusifolius* B. & S. Trunks of trees near water; common.
 81 *rostratus* Schimp. Roots of trees, E. K.; frequent.
 82 *Pylaisia intricata* B. & S. Old trees; common.
 83 *velutina* B. & S. Bark of trees and old logs.
 84 *Cylindrothecium cladorrhizans* Schimp. Dead logs and roots of trees; common.
 85 *compressum* B. & S. Base of trees, common.
 86 *seductrix* Sull. Logs in shady woods; common.

HYPNACEÆ.—Capsule long-pediceled, more or less nodding. Calyptra cucullate. Peristome double; the outer of 16 lanceolate teeth, the inner a membrane divided into 16 carinate segments.

- 1887 *Brachythecium acuminatum*, var. *setosum*. Foot of trees, dead logs, etc., E. K.
 88 *latum* B. & S. Roots and logs in woods, E. K.; frequent.
 89 *plumosum* B. & S. Moist rocks, E. K. (Rau)
 90 *rivulare* B. & S. Moist woods, E. K. (Rau)
 91 *rutabulum* B. & S., var. Shaded ground, roots of trees, etc.
 92 *salebrosum*, var. *longisetum* B. & S. Moist ground, decayed logs, in woods.
 93 *Eurhynchium hians* B. & S. Shady banks, common.
 94 *strigosum* B. & S. Sandy shades, E. K.
 95 *Rhynchostegium rusciforme* B. & S. Stones in streams.
 96 *serrulatum* Schimp. Dry woods, E. K. (Rau)
 97 *Plagiothecium sylvaticum* B. & S. Base of trees in dense shady spots, E. K.
 98 *Amblystegium radicale* B. & S. Decayed logs in shade, E. K.
 99 *riparium* B. & S. Stones, decayed wood, etc., in standing water, N. E. K.
 1900 var. *cariosum* Sull. Saline county. (Rau)
 1 *serpens* B. & S. Decayed wood, moist earth and stones in wet places, E. K.
 2 *Campylium chrysophyllum*: Moist ground, dead wood, roots of trees, etc., S. E. K.
 3 *hispidulum* Mitten: Ground, dead wood, etc., E. K. (Rau)
 4 *Hypnum aduncum* Hedw. var. Damp ground, C. K. (Rau)
 1905 *curvifolium* Hedw. Dead logs in shady woods; common. [Mosses, 101

HEPATICÆ—LIVERWORTS.

JUNGERMANNIACEÆ—SCALE MOSSES.

- 1906 *Aneura latifrons* Lindb. On logs.
 7 *Chiloscyphus adscendens* Hook. & Wils.
 8 *Fossombronina angulosa* Raddi.
 9 *Frullania virginica* Lehm. On trees.
 10 *eboracensis* Lehm. Trees, rocks.
 11 *Jungermannia schraderei* Martius.
 12 *Kantia trichomanis* S. F. Gray.
 13 *Lejeunea clypeata* Sull. On rocks.
 14 *Lophocolea minor* Nees. On rocks.
 15 *Pallavicinia lyelli* S. F. Gray: Ground.
 16 *Pellia calycina* Nees. On rocks.
 1917 *Porella platyphylla* Lindb. On ground.

MARCHANTIACEÆ—LIVERWORTS.

- 1918 *Anthoceros punctatus* L. Wet banks.
 19 *Asterella hemisphærica* Beauv.
 20 *Conocephalus conicus* Dum. Shades.
 21 *Grimaldia rupestris* Lindenb.
 22 *Marchantia polymorpha* L. E. Kan.
 25 *Preissia commutata* Nees. On rocks.

RICCIACEÆ.

- 1024 *Riccia crystallina* L. On damp ground.
 25 *fluitans* L. On water.
 26 *lescuriana* Aust. On the ground.
 27 *lutescens* Schwein. On ground.
 1928 *natans* L. On the ground.

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ADDENDA.

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30 Amorpha microphylla Psh. 37 (Barth.)	42 Amarantus palmeri Watson: 27 (Barth.)
31 Astragalus Purshii Dougl. 27 (Barthol.)	43 Chenopodium fremonti Wats. 27
32 Lespedeza striata L. 41 (Prof. Castle)	44 Euphorbia cuphosperma Boiss. 27
33 Geum vernum T. & G. 41 (Castle)	45 hirtula Eng. 27 (Bartholomew)
34 Ammannia wrightii Gray: 27 (Barth.)	46 Tradescantia virginica, v. villosa W. 27
35 Gaura villosa T. & G. 78, 88 (Smyth)	47 Heteranthera limosa Vahl. 27 (Barth.)
36 Liatris acidota Eng. & Gray: 56 (Smyth)	48 Scirpus supinus, var. Hallii Gray: 27
37 Gutierrezia texana T. & G. 85 (Smyth)	49 Aristida oligantha, v. minor Vasey: 27
38 Artemisia wrightii Gray: 27 (Barthol.)	50 purpurea Nutt., v. Hookeri Torr. 27
39 Thelesperma filifolia Gr. 56, 66 (Smyth)	51 var. Berlandieri Torr. 27 (Barth.)
1940 Veronica scutellata L. 27 (Barthol.)	52 Panicum nitidum Lam. 27 (Dr. Vasey)
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SPECIAL OFFER.

For the purpose of helping botanists and collectors to get acquainted with the plants of the western plains, I will send by mail, American postage prepaid, to any address in America or Europe, a collection of 20 to 25 named plants, complete specimens, on receipt of one dollar federal money. For 10 cents additional I will register the package and guarantee safe delivery.

The attention of American collectors is called to the business notes on page 6.

Address

B. B. SMYTH,
Topeka, Kansas.

SUPPLEMENT, Sept. 1, 1892.

- ° 1954 *Gypsophila muralis* L. 29
- ° 1955 *Lactuca scariola* L. 5-8, 27-9, 31-5
- 1956 *Lepachis tagetes* L. 8-9, 28-9, 47-9, 56, 66-9, 76-9, 85-9
- 1957 yellow-rayed variety: 29. [In this, some of the forms have short yellow-margined rays, others pure yellow rays, and still others have conspicuous yellow rays nearly 4 cm. long, on very robust plants 4 to 5 dm. high, with slightly elongated heads, but very distinct in habit from *L. columnaris*.]
- 1958 *Scirpus atrovirens*, var. *pallidus* Britt. 25
- 1959 *Andropogon saccharoides*, var. *submuticus* Vasey: 86
- 1960 *Aristida purpurea*, var. *Fendleriana* Coult. 7, 27
- 1961 *Beckmannia erucaeifolia* Host. 29

Number of species of trees in the state of Kansas, 102.

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